

Meeting Minutes – NNG meeting Reykjavík, Iceland 25– 26. April 2023

The meeting was hosted by Consortium of Icelandic Libraries and the National and University of Iceland.

List of participants

Institution	Participants
Royal Library of Denmark	Ulla Jensen
National Library of Finland	Katerina Sornová Juha Hakala
DBC D1G1TAL	Line Jung Lindhard Linda Schwartz Karlsen
National Library of Norway	Oddrun Ohren Bjørge Vestli
Sikt	Asbjørn Risan Audun Skorstad
National Library of Sweden	Miriam Björkhem David Södergren Medin
National Library of Latvia	Ilva Ake
National and University Library	Ragna Steinarsdóttir Hallfríður Kristjánsdóttir Kristín Lilja Thorlacius Björnsdóttir/Telma Rós Sigfúsdóttir
Consortium of Icelandic Libraries	Sveinbjörg Sveinsdóttir Sigrún Hauksdóttir (Skúli Þór Bjarnason)

Meeting minutes

Country reports were discussed in the morning on 25.5. After lunch we heard two presentations. First Pétur Húni Björnsson from the Árni Magnússon Institute for Icelandic Studies gave a presentation on *Historical database on Icelandic place- and person names* where data has been gathered from various databases in Iceland at libraries and archives. Then Juha Hakala from the National Library of Finland gave an awakening presentation on *URN and other PIDs – recent developments and future plans*. In the slides from his presentation information on current status of PIDs in use in the Nordic countries can be found. In the end he raised the question if a Nordic PID network was needed and who should participate. A reception at the National and University Library followed. In the end the Consortium of Icelandic Libraries hosted a dinner at a local restaurant.

On the 26.5 various NNG members gave presentations. See more in attached document *Agenda-NNG meeting in Reykjavík 2023.pdf*. Remaining country reports were discussed. In the end Juha Hakala presented on long term preservation under the direction of Ministry of Education and Science in Finland. Then it was time for goodbyes, particularly for Juha Hakala, who will be retiring at the end of the year. He has participated in NNG and its forerunner SVUC from the beginning. Participants were satisfied with the meeting and felt it had been fruitful and a very much needed exchange of current development in the Nordic countries after lack of communication during covid times.

Country reports are attached.

Next NNG meeting will be held and organized by the National University of Norway in 2024.

NNG meeting in Iceland 25 – 26 April 2023

Day 1 – 25. April / Locations CIL and LBS

- National Reports: **9:00 – 12:55: location CIL**
- Transfer to location LBS and a Lunch break: **12:55 – 14:00**
- Presentations and discussions: *location LBS*
 - Historical database on Icelandic place- and person names: *Pétur Húni Björnsson from the Árni Magnússon Institute for Icelandic Studies: 14:00 – 14:55.*
 - URN and other PIDs – recent developments and future plans: *Juha Hakala, National Library of Finland: 14:55 – 16:00.*
- Guided tour and a reception hosted by the National and University Library of Iceland: **16:00-17:00**
- Dinner: **18:30 - 21:00**

Day 2 – 26. April / Location CIL

Metadata and models, RDA, BIBFrame, Share-VDE etc.: **9:00 - 10:15**

- From MARC to entity-based metadata: Application profiles, RDA vs. BIBFRAME and related issues. *Oddrun Ohren, National Library Norway*
- Implementation of the IFLA LRM/RDA-model in the Danish libraries and the union catalogue.
- *Line Jung Lindhard, DBC*
- Discussions

Coffee Break: **10:15 – 10:30**

Cataloguing and Data Quality: **10:30 – 11:30**

- New ways of cataloguing: *Oddrun Ohren, National Library Norway*
- Quality- and Authority control – *Sigrún Hauksdóttir, CIL / Hallfríður Kristjánsdóttir, LBS*

Lunch Break: **11:30 – 12:30**

Other developments on the Nordics: **12:30 – 13:30**

- Future of special-/research and administrative libraries in the Nordics - *Sveinbjörg Sveinsdóttir, CIL / Hallfríður Kristjánsdóttir, LBS*
- Discussion on the EU Directive on accessibility requirements for products and services – *Line Jung Lindhard, DBC*

Library Systems – trends and status updates: **13:30 – 15:00**

- Implementation of a new library system in Iceland (Alma and Primo VE) – *Sveinbjörg Sveinsdóttir, CIL*
- Status update Libris XL and open linked data - *Miriam Björkhem, National Library of Sweden*
- Updates from other participants and discussions

Other Issues / Closing: **15:00s – 16:00**

Locations:

CIL – [Consortium of Icelandic Libraries \(Landskerfi bókasafna hf.\)](#), Katrínartún 4, 105 Reykjavík

LBS – [National and University Library of Iceland](#), Arngrímsgötu 3, 107 Reykjavík

Dinner is at [Kopar Restaurant](#), Geirsgata 3, 101 Reykjavík

Additional Information on presentations

URN and other PIDs – recent developments and future plans – Juha Hakala

I would like to add a short PID status report (one slide per each country or organization) from all of you to the presentation. Currently only Finland (or, to be more precise, the National Library of Finland) is covered, because I do not know what the others have been up to. Alas, PID usage information in the NNG countries has not been collected into one place (or I am not aware of such activity). This kind of information source might be useful when we plan future development of our PID resolvers, or prepare implementation of one.

As regards Finland, in addition to the PID assignment activities in the national library and our partner organizations who also use URN:NBN:FI identifiers, Finnish IT Center for Science (CSC) gives DataCite DOIs for scientific data sets. CSC has partnering organizations which assign DOIs independently, based on a contract with CSC (and DataCite terms of use). For publications, CSC uses also URN:NBNs, see for instance [URN:NBN:fi-fe2020100578094](https://nbn-resolving.org/urn:nbn:fi-fe2020100578094).

Crossref DOIs are used to identify articles in the Federation of Finnish Learned Societies' Journal.fi <https://journal.fi/> service, and monographs in its Edition.fi <https://edition.fi/> service. Initially each Learned Society (read: publisher) got its own DOI prefix, in order to give them a possibility to leave Journal.fi and/or Edition.fi without changing existing DOIs. Nowadays DOI system has been changed so that such precaution is not necessary (resolver instance can change with no impact on DOI prefix).

In all cases above, DOIs are work identifiers. This works fine for information retrieval, but for digital preservation purposes we need additional PIDs to identify manifestations. Since Crossref DOIs cannot be used and mEDRA DOIs (which are based on ISBN-13s) are not a convenient option at least for us, we decided to use URN:ISBNs and URN:NBNs as manifestation identifiers. They can be programmatically generated in the OJS application Journal.fi is using.

Universities which use institutional repositories hosted by the National Library get URNs for their dissertations and theses. Some, if not most, universities which have their own DSpace installations have not registered officially the Handle prefixes they use to assign identifiers to the resources. URN usage has been useful, since it has made it possible to move resources from one DSpace system to another when universities have merged, without changing the PID.

Our resolver can provide either a link to a copy of the resource, or an HTML page listing URLs to the copies of the resource. The resolver was complete rewritten a few years ago and transferred to a more modern database environment. Emma Pietarila can tell you more about that work, in case you are interested. Our plan is to make the application and documentation (in some human readable language) available in GitHub once the app is mature enough. Development continues; the next service to be implemented may be functionality allowing the users to request a list of historical URLs (ones suffering from link rot or content drift). Such URLs can still be used for Web archive searches, so they should not be just removed from the resolver.

Other comments:

The aim is to establish URN as an umbrella system, which covers all widely used PIDs. This should make co-operation between PID systems in e.g. creating new resolution services a little bit easier.

- A URN namespace registration for DOI has been approved (<https://www.iana.org/assignments/urn-formal/doi>). Handle.Net resolver already supports URN:DOI identifiers
- I am discussing with both Handle and ARK communities about URN namespace registrations. With ARK, it could solve the bottleneck in ARK standardization (22 years, 36 Internet drafts, no progress in IETF because URN is blocking the way)

New ways of cataloguing – Oddrun Ohren

An increasing amount of legal deposit is being performed by delivering machine readable files (pdfs), sometimes without any accompanying metadata.

As human cataloguers are scarce resources these days, automizing metadata creation as much as possible becomes vital.

At National Library of Norway we run a trial project (Meteor) developing software to extract descriptive metadata from pdfs of gray material.

We could present Meteor briefly, as introduction to a discussion on opportunities and realities in the area of automatic cataloguing.

Quality and Authority control – Sigrún Hauksdóttir, CIL /Hallfríður Kristjánsdóttir, LBS

In the past cataloguing practices in Iceland have included a precise quality control. This has become somewhat more difficult after the transition from the Aleph to Alma library system. New times require new ways of cataloguing and presumably also new ways for quality control. What is a reasonable quality? What is a sensible quality control in current times? What are the best ways of establishing such control as effectively as possible and which tools are at hand?

From MARC to entity-based metadata: Application profiles, RDA vs. BIBFRAME and related issues – Oddrun Ohren

At National Library of Norway, we have started to prepare for transition to "Official RDA" in the Norwegian library sector by working on RDA application profiles. At the same time, as members of the Share-VDE project a major part of our own metadata are being processed according to a BIBFRAME-based ontology. Hence, the question on if and how RDA-based data can co-exist with BIBFRAME data becomes important.

We would like to present the status of our work and thinking so far. Hopefully to be followed by thoughts and experiences from other Nordic countries.

Implementation of the IFLA LRM/RDA-model in the Danish libraries and the union catalogue. – Line Jung Lindhard

The presentation could add on to the thoughts and experiences from the National Library of Norway regarding From MARC to entity-based metadata: Application profiles, RDA vs. BIBFRAME and related issues

A brief discussion on the EU Directive on accessibility requirements for products and services. – Line Jung Lindhard

Has it led to considerations and/or will it lead to changes in the national bibliographies in the member states? (I know that not all of us are EU members)

Future of special-/research and administrative libraries in the Nordics - CIL

In Iceland many of these libraries are closing. The institutions may still be issuing reports in Icelandic on research but it's unclear how access to those shall be maintained for the future as they are often only published on their website. Is this only an Icelandic scenario? Should we be taking actions here?

NNG meeting 2023 Country report Sweden

Libris as the national catalog

Libris is the Swedish national library catalogue. It contains ten million titles – books, newspapers, magazines and pictures – from about 500 Swedish libraries. It is a union catalogue and a collaborative effort, where the participating libraries add to the metadata content. Metadata is also imported from different sources (e.g. publishers). The national bibliography (created by the national library) forms a core of controlled metadata content. The National Library of Sweden is responsible for the development and operation of Libris.

In the year of 2022 Libris turned 50, which was celebrated at a conference for the participating libraries in November. In September the same year two coordinators were added to the Libris team. Their task is to coordinate Libris activities internally within the National Library, and within the collaboration of Swedish libraries called *the Libris collective*.

After several reorganizations at the National Library, responsibility and decision-making for Libris ended up in several different parts of the organization, which has made progress a bit difficult. Since 2022, managers and employees from different sections of the National library who work strategically with Libris have formed a decision-making body in terms of development. A new Development council has been formed. This consists of representatives from the Libris collective, both public, university, and special libraries. The council meets twice a year to discuss strategic issues for Libris. Its role is advisory and not decision-making.

Libris – current challenges

In recent years, many public libraries have joined the Libris collaboration and today an overwhelming majority of Swedish public participate in Libris. The influx of “new” libraries leads to both opportunities and new challenges as the knowledge of cataloging is not always that high in the different organizations.

The National Library will hold courses for library staff that are employed at libraries which lack personnel with cataloging skills. The courses will be digital and take place in May 2023. We expect about 150 participants. There is an ongoing discussion regarding future layout for the cataloging training.

Libris: software development

During 2022-April 2023 four releases of Libris XL were made. A few examples of new features are:

- Updated import routines: instead of overwriting existing records we are now able to merge the records and combine metadata elements from the records.
- Revision history: introducing the possibility to follow the revision history of a bibliographic record in the GUI. Changes made, when it was made and by which organisation.
- Release process and administration: we took measures to be able to release new versions of Libris with minimum downtime for the end user.
- A template for cataloguing Manuscripts.
- Subject headings from the Queerlit Thesaurus available in Libris.
- Enabling automated romanization in the cataloging tool.
- Preparations for enabling cataloging using linked works.

RDA in Sweden

RDA is used in the national catalog, and in all cataloging done by the National library, with the exception of older print. We have not yet started implementing the new RDA.

ISNI in Sweden

The National library is an ISNI member, and has been aiming to become an ISNI registration agency (ISNI RAG). While these plans are currently on hold, we continue using the identifier in our authority information and promoting its use among Swedish publishers.

A new local library system?

The National library uses Aleph as the local library system. We have just started the process of preparing for a change. We are examining the challenges and opportunities in using the open source system FOLIO. The project is estimated to take at least two years.

19th April 2023
Hallfríður Kristjánsdóttir / Ragna Steinarsdóttir
Sigrún Hauksdóttir / Sveinbjörg Sveinsdóttir

NNG meeting in Reykjavík, April 25th and 26th 2023

Country Report from the Consortium of Icelandic Libraries and The National and University Library of Iceland

1. Introduction

“Landskerfi bókasafna hf.” or Consortium of Icelandic Libraries, www.landskerfi.is is a public limited-liability company founded in 2001 with the purpose of operating a national library system for Iceland. The company is jointly owned by municipalities and the Icelandic state. The consortium is responsible for the operation and development of the library- and discovery system in use in around 300 libraries in Iceland. Among the member libraries are the National and University Library of Iceland, several smaller universities, public libraries, primary and secondary school libraries as well as research libraries.

2. Gegnir, Leitir, Rafbókasafnið and Sarpur

The national library system in Iceland is branded Gegnir (Alma from Ex Libris) and the national discovery system goes by the name Leitir.is (Primo VE from Ex Libris). Rafbókasafnið is a brand of the Overdrive platform operated by the Consortium for public library members of the Consortium for lending of E-books and Audiobooks. Furthermore, the national cataloging system for museums in Iceland, Sarpur is operated by the consortium. Sarpur is used to catalog and record artifacts, photographs, archaeological sites, historic buildings, place names and cultural history. Sarpur is used by over 60 museums and cultural heritage institutions around Iceland.

3. Implementing a new library system for Gegnir and Leitir

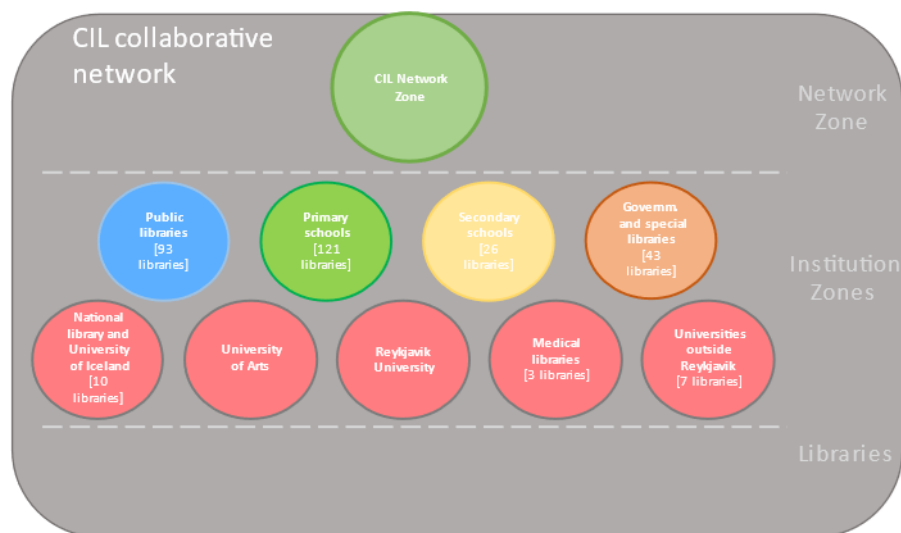
In June 2022 libraries in Iceland went live with the Alma and Primo VE library- and discovery system. The Consortium of Icelandic Libraries lead the implementation of the system in collaboration with major stakeholders. The Consortium signed a contract with Proquest, an Ex Libris company end of 2020 following the merger of Innovate Interfaces with ProQuest. Onboarding activities started early 2021. Implementation activities including data migration, system setup and configuration began in March 2022 and culminated in June 2022 upon Go-Live.

The project turned out to be very labor intensive and challenging. In retrospect, both parties underestimated the complexity of the project and so the needed implementation time. Despite contractual enhancements (library independence) made to ensure patron privacy and ease the use of the system in school- and public libraries it has proven hard to use for staff in those libraries. Currently the Consortium is in strategic discussions with Ex Libris with the aim of

improving the usability of the system at „Circulation Desks“ in the public- and school libraries. These are busy venues and efficient and good patron services are of essence. System performance leaves a lot to be desired. Getting to a joint understanding proved to be a challenge for both Ex Libris and the Consortium, thus communication was somewhat lacking at start but improved greatly as the project moved forward. Project management has been very good.

The system architecture consists of three layers, institutions, network and community. The system topology is based on nine separate institutions and a network zone that supports shared data management, i.e. the bibliographic and authority databases, the national registry for the user information and other consortia services. Each institution is shared by many libraries with the ability for each library to manage their inventory, circulation activities and acquisitions.

Topology: 1 Network Zone, 9 Alma/Primo Institutions



The institutions are divided by library type, i.e. public libraries, elementary school-, secondary school libraries, special and administrative libraries but due to the management of the electronic subscriptions the universities are mostly alone in an institution. The largest institution from the point of number of libraries is the elementary schools and from the point of circulation and items it is the public libraries and of course from the point of bibliographic record it is the National Library.

The discovery in Primo VE was another major project. The aim was to have a shared discovery platform as well as a special library view for each library. Currently there are almost 250 views associated with leitir.is. Primo VE is interconnected with Alma so limitations in Alma are often reflected in Primo VE.

3.1 Training

It has been a huge job to teach and assist the libraries and their staff to master the system and especially the new workflows. One hundred and sixty courses were offered and approximately 2.500 library staff members attended. To put this into perspective there are

approximately 700 staff members on our mailing list. Many people attended the same course often and even that was not enough, so we have offered individual Teams sessions for those that needed extra help.

The training was set up with three mandatory courses: Alma fundamentals, inventory (adding an item) and fulfillment. Succeeding these mandatory classes, we would offer follow-up classes. At times the teaching was rather intense and more or less there were two classes per day.

3.2 Services

The workload connected to problems and lack of know-how at the libraries has been enormous. The system has proven to be hard to use for the public- and school libraries. Fine tuning of configuration was not finished at opening the system which resulted in an overflow of service requests. Slowness and other problems related to multiple items per title has increased the workload.

4. National and University Library of Iceland (NULI)

4.1 RDA

RDA was originally implemented in 2015/2016. All libraries catalog according to the original RDA Toolkit. No plans currently on when or how to implement the current RDA Toolkit. A selection of relationship designators and content/media/carrier terms have been translated, but the guidelines have not.

Catalogers use a local MARC21-based manual (created and maintained by the National Library) as a cataloging guide. The manual was updated and restructured during the Alma implantation. There are now direct links from Alma Metadata editor to the relevant pages in the manual.

4.2 National bibliography and Legal deposit

All national bibliographic data is contained in the library system, Alma. The bibliography is published to a webpage utgafuskra.is. The statistics and data in this page no longer accurately represent the national bibliographic data, f.ex. when it comes to electronic publication and gray material vs. published. Work has started on updating and restructuring this page.

There are some challenges to this work, especially when it comes to electronic gray material. Legal deposit law from 2002 in Iceland makes it is difficult to find and obtain this material. Material that is published on the web is considered legally deposited. There is no requirement to deliver it specifically to the National and University Library of Iceland.

4.3 Authority and quality control of the bibliographic database

Following the implementation of the new library system, questions arise on how to maintain quality control. We need to rethink quality control. The bibliographic and authority records reside in a shared network zone, but the inventory of each library is located in 9 different institution zones. All 9 institution need to take more responsibility for their inventory, but how this can be achieved is uncertain.

Alma provides some out of the box tools for authority control. We now use LC authority file for all foreign entities. NULI maintains the local Icelandic Authority File. In the past, the focus was on Icelandic personal names and subject terms, but we need to extend the work to include more entities such as geographic terms in Icelandic (country names included), works and corporate names. For those entities there is a backlog.

We had to make extensive changes to how we record Icelandic personal names. ExLibris/Alma did not accept our granularity of recording each name element in a separate MARC21 subfield. This was very hard for us to swallow.

Iceland has been a member of Vial for some years. Vial provided identifiers to the authority records in Aleph. This process is still not in place in Alma.

4.4 NULI databases and repositories

NULI maintains a few databases and repositories which are directly linked to the bibliographic database. For example there are direct links from the digital library timarit.is, which contains digitized newspapers and journal articles to the corresponding bibliographic record in Alma. All these links had to be rebuilt in Alma and timarit.is. Timarit.is is one of the most popular web pages in Iceland, freely available to everyone and used by researchers and the public alike. There is an embargo for some of the latest material. Relinking also had to be done for other repositories, such as [Baekur.is](http://baekur.is) which contains digitized books and [Rafhladan.is](http://rafhladan.is) which is the depository for electronic publications.

[Iris](http://iris.is) is the Icelandic Research Information System. The research portal shows the research activities of Icelandic institutions participating in the consortium across the country. The National and University Library of Iceland is responsible for operating and supervising the system on behalf of the Ministry of Education and Culture. Iris is a Current Research Information System (CRIS) from Elsevier, called PURE. IRIS provides a public platform to examine research activity across institutions and the social distribution of research knowledge created in Iceland. Contributions and collaborations of researchers, institutions and disciplines can be viewed on a domestic and international level using the portal. The IRIS information system is under constant development and will change as the project progresses.

5. Tendering for a new national system for museums

On November 30th 2022 an invitation to tender for a new national cataloguing system for museums and alike was issued. The new commercially acquired system will replace the current locally made software used for Sarpur. Six vendors sent in offers and three qualified for the final round. A selection is planned before end of April.



Country Report: National Library of Norway

NNG meeting in Iceland 25 – 26 April 2023

Introduction

The National Library of Norway (NLN) is responsible for legal deposit, the Norwegian National Bibliography and National Authority files. The library is a part of the BIBSYS consortium.

Digital workflow for legal deposit

The National Library has implemented a digital workflow for legal deposit. In addition to physical objects, both digital publications and digital printing files are subject to legal deposit according to the Legal Deposit Act from 2016 with Regulations from 2018. NLN receive digital printing files for books from Bokbasen and music sound recordings from The Orchard. The files are followed by a minimum set of metadata which is converted and imported to Alma. Smaller publishers, also for maps and sheet music, can upload and deposit monographs in a form on our website (in Norwegian).

Metadata Well

NLN is investigating how a central national vault for production and sharing of metadata may be implemented – working title: Metadata Well. The establishment of the Metadata Well is based on measures specified in the [National strategy for libraries 2020–2023](#) from The Ministry of Education and Research and the Ministry of Culture.

The Metadata Well shall provide libraries and others with a single authorised source of uniquely identified metadata descriptions. The Metadata Well must be accessible via open and standardized interfaces in several formats, including MARC 21 and linked data.

The Metadata Well will also constitute a hub for the reuse of metadata between libraries. Suppliers of metadata and service providers can use the infrastructure provided by the metadata well to provide additional data or services.

So far, overall requirement has been set up and a RFI published. Now, we are investigating integration with local metadata production in NLN and possible management systems.

Share VDE

We are still a member of SHARE-VDE, a library-driven collaboration between several American academic libraries including Library of Congress, and some European national libraries (British library, National Library of Finland, and National Library of Norway (NLN)). The coordinator is Casalini Libre AS, an Italian metadata supplier and software provider, assisted by the Danish company Samhaeng on the user interaction side.

The main goal of the project is to establish a data processing & discovery infrastructure in which bibliographical linked data entities are extracted from metadata and authority data submitted regularly by member libraries, to be made available for exploration through the joint discovery interface. The linked data are generated according to BIBFRAME, extended to fit into RDA oriented settings.

While our original motivation for joining the project was to obtain (RDA) Work authorities from our Marc records, we also see that exposing our catalogue as linked data on an international platform might in itself be beneficial.

During the last 2 years a beta portal <https://svde.org> has been launched and the system has been migrated to the cloud (AWS). The project has adopted a tenant infrastructure, acknowledging that most requirements are shared among members and can be handled by the same user environment (the "general" tenant svde.org), yet there are sub-domains with slightly different needs which can best be catered for in separate environments (tenants). Notably, the [National bibliography tenant](#) is under development, currently with data only from British Library.

The linked data quality on svde.org looks promising, but with room for improvement. Better opportunities for data analysis will be afforded as soon as our data can be accessed via Sparql, which we are told will happen before long. Also, the long-awaited integrated editor J.Cricket will hopefully be available for testing at some point during this year.

[RDA application profile](#)

The original RDA toolkit will soon be deprecated and the official toolkit assumes the use of the RDA ontology. NLN is currently working on creating application profiles for linked data cataloguing in accordance with the official RDA toolkit. This work will inform the development of new cataloguing practices, tools and workflows in a future linked data environment.

[Audiovisual collection - new collection management system](#)

After a tender in 2022 NLN is in a process of implementing Collections, Flow and Piction from Axiell as a management system for the audio-visual collection. Data conversion and implementing will continue throughout 2022. The goal is to launch the system at the turn of the year or early in 2024.

[ISNI](#)

NLN will become a Registration Agency for ISNI in the near future. We are currently waiting for the contract to be signed. We have for some years been a member and have updated our national authority file with ISNI by sending batch loads to ISNI. So far this has only been done twice. Our aim is to send batch loads more frequently, preferably once per week.

NLN will assign ISNI to persons registered in the National Bibliography and work with publishers and Bokbasen to have ISNI assigned as early as possible in the process.

[New ways of cataloguing](#)

An increasing amount of legal deposit is being performed by delivering machine readable files (pdfs), sometimes without any accompanying metadata. NLN is experimenting with automation of metadata creation in the trial project Meteor (METadata Ekstraksjon fra Offentlige Rapporter), developing software to extract descriptive metadata from pdfs of gray material.

DK

Danish report to NNG April 2023

Nordic Networking Group on bibliographic and infrastructure topics (NNG), Reykjavik – April 25-26, 2023

DBC

RDA

On request from KOMBIT (the owner of DBC) DBC has described a new implementation scenario and estimated the costs of the technical implementation of RDA in the Danish library infrastructure, known as FBI. This has led to further negotiations between the Danish state and KL (the municipalities), and we expect the parties to reach an agreement later this year.

In short, we will implement RDA 'persons', 'corporations' and 'works' – the latter with some limitations. And in addition we introduce four special Danish entities: 'data well works', 'work groups', 'series' and 'universes'.

A repository for these entities, VERA, will be established as part of the FBI. The first version of VERA will be accessible and editable for the cataloguers in the public libraries in Denmark. All VERA entities will be registered using a MARC-format that will support relations between entities.

The major changes in the bibliographic records will be the references to VERA entities, and the marking of which entity; work, expression or manifestation, that a given data element belongs to / describes.

Prior to the actual implementation project the Danish Agency for Culture and Palaces will have to have a Danish cataloguing handbook written and additional necessary specifications made, such as the new MARC-formats for bibliographic and authority records and the conversion specifications to/from MARC21.

The RDA implementation project will take place in parallel with the development of a new cataloguing editor.

Danish Library Infrastructure

We have just launched a new API for our national infrastructure with end points for searching, for fetching metadata about a work or a manifestation, for getting recommendations based on another manifestation etc. This API was and is developed together with a new version of our national discovery graphical interface (bibliotek.dk) but is meant to be used also by other developers of end user interfaces for library data.

For this purpose, we have developed a new JSON format for metadata on works and manifestations. We have named it JED (JSON Expanded Data). The general idea is that the keys of the properties make sense to most people ("title", "creator", "subject" etc.) and through the API you can ask for just the properties you need instead of getting a whole MARC record. JED is developed in close collaboration between metadata specialists and developers of the user interfaces.

Metadata development

Series and universes

As part of our SBD strategy (SBD: supplerende biblioteksdata = supplement to the national bibliographic metadata aimed for the public libraries and end users) we have introduced two new entries: popular series and universes.

Popular series are series, that meet end user needs by gathering bibliographic series, multivolumes, sequel novels etc. with no regard to what is actually mentioned on the material in hand but based on what people often use as a series title.

With universes we collect multiple series and various materials across material types and languages.

New strategy for subject indexing

How we assign subject terms to library materials has not changed much in many years whereas how these subject terms are used by humans and computers has changed a great deal. Therefore, we are currently working on a new strategy for subject indexing. Some of the main points in the new strategy will be transforming our subject records into authority records, establishing relations between subject terms to better support end users finding what they are looking for, using a mix of controlled and uncontrolled subject terms, manually and automatically assigned, and working more differentiated with categories of subject terms, including appeal factors.

Cataloguing skills and recruiting

Information studies don't contain cataloguing courses, we therefore experience a lack of "basic" skills when we recruit new colleagues, and as a consequence we have developed our own curriculum and run a set of courses for all new employees in the Metadata department.

All staff is offered to attend the courses.

(It is a general trend in the library profession, that the "old" library disciplines decline due to a lack of knowledge because information retrieval, cataloguing, indexing and classification are no longer a part of the Information studies.)

EU Directive on accessibility requirements for products and services

The European accessibility act that becomes effective in Denmark by June 2025 requires further accessibility metadata than today. The production chain – publishers and distributors – are working on how to produce these metadata, and we have raised the question to the Danish Agency for Culture and Palaces whether these metadata are required in the national bibliographies and/or when they are published on public websites.

AI

We have just begun exploring the possibilities for automatic subject indexing using AI techniques. As a first step we focus on Danish journal and newspaper articles but if that works well, we hope to expand it to other texts where full text is available. The idea is to use full text articles with manually assigned subject terms as training material to determine relevant subject terms for other articles. We have approximately 40,000 controlled subject terms with no specified relations to each other, so we are trying to map our terms to the YSO ontology as a way of improving the possibility of finding the most relevant subject terms in the automatic indexing process. As a by-product of this we hope to get relations between our subject terms that can be used also in searching and navigating catalogues.

Trends

Podcasts

We have received a large number of podcasts (approx. 4000). The national bibliography allows only the registration of one hundred podcasts per year. As a consequence, the podcasts are imported to FBI's data well without national bibliographic and SBD metadata.

New strategy for music cataloguing (SBD)

There has been a steep decline in acquisition and loan of music recordings in the Danish libraries over the past years. Therefore, we have invited our consulting committee to consider a new strategy on the subject, focusing on specific genres and types of music. However, the question has been postponed as the Central Libraries in Denmark are initiating a similar discussion.

Apps as part of the national bibliography

It has been considered whether apps should be a part of the national bibliography. The question was raised because some works that used to be published as books instead are published as apps. However the considerations have been terminated without any conclusion, as it has proven difficult to define and describe the criteria to determine the national bibliographic boundaries, and to judge whether an app consists of "content" or merely "functionality".

KB

RDA

KB is working closely together with DBC on this matter. KB will also look into RDAs influence on ALMA and registration procedures.

Archives in ALMA

In 2022, KB has moved a large part of the collections to new temperature controlled storage outside of Copenhagen. We are now preparing the second round, where we are registering 3.5 kilometers of fine print (Småtryk) from the last 30 years. In this process, we have had many

discussions about how to fit an archive into ALMA the right way, following as many cataloguing rules as possible.

Due to time consumption, the entity in this collection can't be the single pamphlet, but the box, that contains several pamphlets, and maybe even from different corporations.

Country Report from the National Library of Latvia

NNG meeting, Reykjavík, 25-26 April 2023

2023 work priorities of the National Library of Latvia (NLL):

- Continuation of the transition to building a linked data ecosystem and the gradual move to an entity based data model.
This emphasis on data is for the first time.
- Mutual integration of cultural heritage systems (libraries, archives, museums).
- Continuation of bringing readers back to NLL, with a particular focus on relevance of the collection to target audiences, coordination of content, and linking of collection creation to issues of use and deployment.
The number of readers visiting LNB in person has increased, but the pre-pandemic level has not yet been reached.
- Composition of the Development Strategy 2024-2028 for the National Library of Latvia.
From the competence area of the Bibliography Institute, the following issues should be included in the strategy:
 - Moving from closed environment and locally built systems to data linking in open environment;
 - Data quality improvement (editing of data created according to old standards), prevent data creation/quality control for the same object simultaneously in several systems;
 - Implementation of entity based data model (properly structured data, unique ID for each data element, prepare data for the transition to a new data format);
 - Greater involvement of employees of LNB structural units, incl. creation and control of authority data.

Implementation of RDA

- RDA (Resource Description & Access) dictionary of terms, values and relationships was published in the RDA Registry in Latvian (April 2022).
- Development of methodology for cataloguing of rare books.
- Development and implementation of methodology for cataloguing of manuscripts.
- Development and implementation of methodology for cataloguing of posters.

- Translation and preparation for implementation of RDA element sets: RDA Unconstrained properties.
- Initiated research on RDA relationships structure to begin implementing it in MARC bibliographic and authority data.

Authority data

- Authority records are enriched with persistent identifiers: ISNI, Wikidata, VIAF, ULAN (added automatically from VIAF), Researcher ID, ORCID (added manually to Persons and Institutions that are Latvian authors or are in some relationship to Latvia). Identifiers allow to link Latvian authors with the relevant entry of the e-version of the Latvian National Encyclopaedia (being prepared by the NLL).
- Translation and preparation for implementation of RDA element sets: RDA Unconstrained properties. Potential integration of RDA Unconstrained properties with the Reference Data System of Cultural Heritage (ATS) data is considered as it better meets the data needs of museums and archives.
- Creation of authority data has started for Series, Collection of works and Works of several authors with equal importance.
In case of Collection of works and Works of several authors, a decision has been made to create the Work authority record on the Work title, connecting person's (author's) entities to it.

In 2023, it will be 10 years since the authority data created by NLL are sent to VIAF.

National Thesaurus

- Continuation of implementation of the FAST system in the National Thesaurus data:
 - Implementation of different form/genre facets needed to describe different resources, e.g. visual materials, audio, video resources etc.;
 - Realization of possibilities to adapt form/genre facets in digital collections, as well as to create new objects for future usage in other memory institutions.
- Edition of geographical names in accordance with the county reform.
- Improvement of the methodology for creation of authority records for named ships, railway stations etc.: data were separated from institutions entity and now are created as thematic subjects or geographical-name subjects.
- Study of implementation of MARC field 147 (Event), development of the methodology and template.

National bibliography

- Modelling, mapping, and creating of workflows for moving the authority files and bibliographic data of the National Library of Latvia to Wikidata as a major hub of the semantic web.

The main focus is on modelling and integrating library authority files (at first only Works and Editions) to a full extent into Wikidata, reducing any possible data loss to a minimum. NLL is participating in the WikiProject Books and adhering to the established data model to accomplish that. The first batches of Work authority records have been uploaded to Wikidata.

Work example: <https://www.wikidata.org/wiki/Q71416129>

Manifestation example: <https://www.wikidata.org/wiki/Q112276034>

This information is accessible for querying using Wikidata SPARQL endpoint.

- Linking of National bibliography Article database (articles from journals and newspapers) records with the portal periodika.lv, providing access to the full text of articles.
- Gradual editing of historical national bibliography data is done manually and semi-automatically using various tools (for instance, Open Refine) keeping in mind the capabilities of the ALEPH system.
- Participation in the project “Towards Development of Open and FAIR Digital Humanities Ecosystem in Latvia (DHELI)” (2022-2025)
The aim of the project is to advance digital humanities in Latvia in order to support the development of the existing digital resources and tools intended for humanities and enhancing their usage in research and education. The contribution of the experts of the Bibliography Institute to the project is the enrichment and/or correction of the bibliographic data, as well as the analysis and preparation of the data set (novels by Latvian authors whose first editions were published before 1940 and their reprints).

The project “The Latvian Memory Institution Data in the Digital Space: Unifying Cultural Heritage”

Scientific contributions of the project describe the requirements for a new cross-sectoral data model to promote semantic data interoperability between Latvian cultural heritage institutions in the digital environment and moving from records in individual institutions’ closed systems to creating a single register of cultural heritage entities.

The project was completed at the end of 2022:

- Data integration and mapping of NMKK (National Museum Joint Catalogue) data and Reference Data System of Cultural Heritage (ATS) are continued including data cleaning and preparation for initial ATS migration.

- Data integration and mapping of the National Archives of Latvia data with ATS are continued. Workflow and mutually agreed classifiers were developed. Workflow and mutually agreed classifiers are developed.
- Potential integration of National Thesaurus data with ATS data was considered.
- Mapping of museum objects with NLL authority records was carried out.

The NLL Open Data Portal <http://dati.lnb.lv> has been supplemented with new data sets:

- **NLL Ontology Service**

<https://dati.lnb.lv/onto/nllsh/en/?clang=lv>

The NLL Ontology Service contains information about NLL's subject headings, geographic authority data and genre/form authority data made available as SKOS Linked Data. This information is published using Skosmos and includes links to relevant information in other library datasets such as Library of Congress Subject Headings, Wikidata, Finnish Ontology YSO etc. These links ensure that NLL's authority data is even more informative and contextually rich.

Example (NLL subject authority ontology): <http://dati.lnb.lv/onto/subject/LNC10-000076707>

- **Linked dataset of the RunA collection**

Linked dataset of the [RunA collection](#) is structured data about collection's objects, entities, and links between them. Entity data also contain references to data about these entities found in other sources of information. Data for each collection object and entity are available in [RDF/XML](#) and [Turtle RDF](#) format.

Website: <https://runa.lnb.lv/en/par-kolekciju/>

Turtle RDF data: https://dati.lnb.lv/files/runa-2021_04-turtle.zip

RDF/XML data: https://dati.lnb.lv/files/runa-2021_04-rdfxml.zip

- **National bibliography dataset**

The National bibliography dataset for the period of 2016–2021 contains structured data on books published in Latvia, including information about their authors and co-authors, titles, publishers, etc. The data is available in MARC/XML and BIBFRAME/RDF format.

RDF dataset: https://dati.lnb.lv/files/natl_bibliography-2016-2021-bibframe.zip

MARC dataset: https://dati.lnb.lv/files/natl_bibliography-2016-2021-marc.zip

- **Dataset of Work authority records**

The dataset of Work authority records 2019–October 2022 is structured data on works published by Latvian authors, including information on the genre of the work and the years of writing/publication. Data is available in MARC/JSON and BIBFRAME/RDF format.

RDF dataset: https://dati.lnb.lv/files/aut_darbi.bibframe-2019_2022.zip

MARC dataset: https://dati.lnb.lv/files/aut_darbi.marc-2019_2022.zip

- **Publisher authority data**

Publisher authority data: The dataset of authority records of Latvian publishers contains structured data about Latvian organizations engaged in publishing activities. Data is available in MARC/JSON and BIBFRAME/RDF format.

RDF dataset: https://dati.lnb.lv/files/aut_publishers-bibframe.zip

MARC dataset: https://dati.lnb.lv/files/aut_publishers-json.zip

Work organisation after the COVID crisis (return to “normality”)

On April 1, 2022, most of the restrictions have been removed after the COVID crisis, including those that related to the work environment and work organization in workplaces.

On October 1, 2022, new limitations on working hours and internal work organization were set for state institutions, including NLL:

For 2 days a week - on Mondays and Tuesdays, remote work was set for NLL employees. Remote services were provided for readers. On Saturdays, only employees who serve readers work. The library is closed on Sundays.

M	T	W	T	F	S	S
Remote work	Remote work	Normal work	Normal work	Normal work	Only services for readers	Closed

From February 1, 2023, work at the NLL premises on Tuesdays has been renewed.

Limitations were determined taking into account the increase in energy service prices and the need to optimize the use of financial resources available to the institution.

Support for saving Ukrainian cultural heritage

- On March 2022, in response to an international initiative to support the rescue of Ukrainian archives, museums and library collections, the National Library of Latvia in cooperation with the charity “ziedot.lv” launched a fundraising campaign “Let’s save Ukraine’s cultural heritage”. Within 22 days 16,118 EUR were donated from all over Latvia and abroad (individuals, organizations and companies).

Much-needed materials to Ukrainian colleagues were materials to use in the packaging and protection of cultural property. More than 70 cubic meters of material were collected using money and donated physical items useful for the preservation of the collections (thick cardboard boxes, bubble wrap and sintepon rolls, vapor barrier film, various insulating tapes, stone wool, foil, foam plastic sheets, acid-free cardboard, packaging paper, etc.).

The donated materials were delivered to the scientific library of the Lviv National Polytechnic University, where the Ukrainian Cultural Heritage Rescue Center has been established. The Center provides first aid to the values that have suffered during the war.

Most of the donated materials were distributed to different cities of Ukraine and cultural heritage institutions.

- Company "Latvijas Finieris" donated a load of veneer and 10,000 EUR to purchase materials and tools. The donation was delivered to the cultural institutions of the Kherson region, which have suffered greatly after the occupation by Russian forces.
- NLL organized also the collection of individual donations (money, clothes, household items etc.) for Ukrainian people who have found their home in Latvia during the war.

The NLL invites Ukrainian people to the Library (*NLL work priority - to bring readers to library*):

- Leaflet with basic information of library services, events was prepared also in Ukrainian.
- LNN launched a digital guide for getting to know library. Digital guide is available free of charge on the website <https://gids.lnb.lv/> in Latvian, English, German, Ukrainian and Russian.
- More than 350 books for children in Ukrainian have been sent to the NLL from Ukraine (purchased by Aleksandra Shimin, NGO "Foundations for Freedom"). Books were distributed to the public libraries of the regions of Latvia, where it is known that a significant number of families from Ukraine with children have settled and where the books are significantly missing.
- In August 2022, LNN, in cooperation with the Society Integration Fund, organized 120 hours of free Latvian language training with the aim of helping people from Ukraine learn basic Latvian language skills (A1). The lessons were conducted by NLL volunteer employees.





Country Report 2021–2022 from the National Library of Finland (NLF)

NNG meeting, Reykjavík 25-26 April 2023

The National Library's strategy for 2021–2030 ([pdf](#))

Library systems

17 research libraries (including NLF) have used open source library system Koha since 2018-2019. All these libraries use also Finna as UI and Melinda as cataloguing system. Most university and polytechnic libraries have used Ex Libris's Alma since 2020. Some of these libraries use Finna as user interface (UI). NLF participates actively in the development of the Koha.

Discovery and delivery tool Finna

NLF is responsible of Finna.fi service, which provides free access to metadata collected from more than 450 Finnish museums, libraries and archives. An overview of participating organizations' own Finna interfaces is available at <https://www.finna.fi/Content/about>. More information about all participating organizations, see <https://www.finna.fi/Content/organisations?lng=en-gb>.

In 2022 there were 4,25 million user sessions in the system, during which 51,6 million searches were made. Finna.fi index continues to grow fast; in the end of 2022 it contained 79.1 million records.

2021-2022 several public library consortia replaced their old user interfaces with Finna. As a result of this, Finna is now the user interface of most Finnish public libraries.

Finna uses VuFind (<https://vufind.org/vufind/>) open source portal software. NLF is an active developer of the application and has for instance developed functionalities needed for consortia usage. One of the novel search features we have developed is Finna Street, which allows searching of geolocated resources such as photographs. A user can ask Finna to e.g. retrieve all resources near his or her current location (see <https://www.finna.fi/Search/StreetSearch>).

See also https://www.finna.fi/Content/about_finna.

Melinda

Melinda is a metadata repository currently containing the Finnish national bibliography (Fennica), the Finnish National Discography (Viola) and the Finnish article index database (Arto) as well as metadata about the materials in the collections of university and polytechnic libraries, other research libraries and public

libraries. Altogether Melinda contains as of this writing more than 17 million bibliographic records, produced by the 287 libraries taking part in co-operative cataloguing.

The National Library of Finland is looking for a new system to replace Aleph, the integrated library system that has long functioned as a platform for the National Metadata Repository Melinda. Our intention is to implement an open source system that supports linked data. At the moment, we are extensively investigating Libris XL, a system developed by the National Library of Sweden, and possible collaboration options with it. We are especially interested in examining to what extent a system developed for one country could be adapted for more general use in order to be utilized by others. Further investigation aims at acquiring a deeper understanding of the technical solutions underlying Libris XL and their applicability for further development.

For more information, please contact Lassi lassi.lager@helsinki.fi

Melinda's platform change is closely connected to the Linked Library Data project, which aims to develop a linked data model for the bibliographic description.

Linked Library Data Project

In 2022 NLF began the Linked Library Data Project with the aim of preparing the move to linked data for Finnish bibliographic records. The main goal of the project is to adapt BIBFRAME to our cataloguing conventions including support for the Official RDA by the end of 2024. Additionally, the project prepares the conversion rules for our MARC records into the new data model and back again since we foresee MARC 21 living on for a long time in local library systems. Web page: [Linked Library Data project \(LKD\)](#)

For more information, please contact Matias matias.frosterus@helsinki.fi

Finto

The national thesaurus and ontology service Finto develops linked open vocabularies and ontologies, and tools for using vocabularies in the Finnish public sector. In 2022 there was over 730 000 visits on the Finto sites and 1,8 M pageviews. The NLF also develops the Skosmos, which is an open source code thesaurus and ontology browser application operating on the background of the Finto service. During 2021 Skosmos was taken into use for example in National Libraries in Norway and Latvia and in the UK Data Service. During 2022 Skosmos was adopted in National Agricultural Library NAL (USA) and in The National Library and Archives of Iran (NLAI).

For more information, please contact Mikko mikko.lappalainen@helsinki.fi

Annif and automated metadata extraction

NLF continued the development of the Annif (annif.org) automated subject indexing tool and the Finto AI service (ai.finto.fi), which is our production instance of Annif that enables automated subject indexing using the trilingual (fi, sv, en) General Finnish Ontology YSO (including YSO Places) as the subject vocabulary. We have just released Annif 0.61 and expect to make a 1.0 release later this year, which signifies that Annif is ready for general production use. Of course, it is already in production use not only in Finto AI, but also by the Finnish Broadcasting Company Yleisradio, the German National Library (DNB) and the Leibniz Information Centre for Economics (ZBW) and lately also the SwePub repository of the National Library of Sweden.

NLF is also investigating tools for extracting bibliographic metadata from PDF files and other electronic documents, for example university theses, reports from government organizations and other grey literature. In previous years, we have experimented with the GROBID tool, but the results were not very good. Last year, we partnered with Lingsoft Inc. to find other solutions, and they produced a prototype

system capable of extracting basic Dublin Core style metadata from PDF files using a simple machine learning approach – extracting short pieces of text from the PDF and classifying them into individual metadata fields. However, the quality was not very good even in this approach. Most recently, with the rise of ChatGPT and other large language models, we decided to look at whether language models could be applied into this task and produced a quick prototype using the OpenAI GPT-3 API. The results were surprisingly good at least for the set of doctoral theses we used, so we are now looking closer at this approach together with Lingsoft. But we are wary of relying on OpenAPI and cloud services controlled by large tech companies and would prefer to work with more open and possibly locally running language models.

For more information, please contact Osma osma.suominen@helsinki.fi

Fennica and Viola in numbers

How many books are published in Finland each year? What are the most common genres of music? Are books longer or shorter today than they were a century ago? Find answers to these and many other questions in a new publication presenting Finnish publication topics and changes in publication numbers over the years.

The publication “Finnish National Bibliography 2022 – Fennica and Viola in figures”:

<https://urn.fi/URN:ISBN:978-951-51-8970-7>

For more information, please contact Katri katri.riihelainen@helsinki.fi

Open access repositories

NLF hosts several DSpace-based institutional repositories. Finnish polytechnics use Theseus (<https://www.theseus.fi/>) for their thesis and electronic publications. Doria (<https://www.doria.fi/>) is used by NLF and multiple other organizations. In addition, there are 10 organization-specific repositories. All NLF repositories use URN (either URN:NBN or URN:ISBN) as the persistent identifier. This enables us to easily transfer resources from one repository to another if and when necessary.

Identifiers

ISNI

NLF became a ISNI registration agency in 2020. We send the data of new and updated agents to ISNI database once a week. We have implied ISNI processes into our everyday (describing) workflows. We have an ongoing project with Finnish CMOs and trying to encourage/support the Finnish publishers with implementing of ISNI.

The adoption of ISNIs in Copyright Management Organizations ([web pages](#)): The ISNI project consists of two overlapping stages. During the first stage (2/2022–12/2023), ISNIs will be acquired for rightholders represented by the Finnish CMOs. During the second stage (1/2023–12/2024), interfaces will be constructed to enable the effective distribution of ISNIs, and metadata in the CMO databases will be enriched. NL of Finland coordinates the project and acts as a ISNI Registration Agency. The key benefit of the project is the reliable identification of contributors to creative works with an international identifier regardless of the field of art. Project is funded by the Next Generation EU programmes.

For more information, please contact Katerina katerina.sornova@helsinki.fi

URN and other persistent identifiers

NLF is responsible of two URN namespace registrations, URN:NBN (<https://www.iana.org/assignments/urn-formal/nbn>) and URN:META (<https://www.iana.org/assignments/urn-formal/meta>). URN:META is not in

production yet; it is intended for language independent persistent identification of elements in metadata models and formats. URN:NBN is used in at least 13 countries.

As of April 2023, about three million URN:NBNs have been assigned by NLF and its partner organizations. NLF supports also the Finnish part of URN:ISBNs (e.g., URN:ISBN:978-951 and URN:ISBN:978-952) and cooperates with the International ISSN Centre in the implementation of URN:ISSN.

In addition to identification of publications (as works, expressions and manifestations) URN:NBNs are used for identification of component parts of publications, and other resources such as ontology concepts. NLF has also registered namespace URN:META which we intend to use for identification of metadata elements in MARC 21 and other formats.

NLF does not provide DOI-based services, but we are investigating the need for this. There are currently two DOI providers, CSC – IT Center for Science (CSC) for research datasets, and Federation of Finnish Learned Societies (TSV) for articles in their Journal.fi service and monographs in their Edition.fi service. CSC uses DataCite DOIs, TSV Crossref DOIs, so in both cases it is the work that is identified, not manifestation. Therefore, it is difficult to get a DOI for Finnish research articles which are not published in Journal.fi. As an aside, it is also necessary to get another PID than the work level DOI for manifestations of the articles published in Journal.fi. These articles will be preserved in the long term, and the national digital archive service hosted by CSC requires manifestation level PIDs.

For more information, please contact Juha (juha.hakala@helsinki.fi)

RDA

The official RDA has been translated fully and is updated at the same phase with the English version. The first series of the training sessions executed in Autumn 2022 and the second is ongoing now in Spring 2023. The basic policy statements and community refinements have been created in the official toolkit. The Finnish official RDA will be ready for implementation at the end of 2023. The schedule of implementations has not been decided yet.

In order to integrate BIBFRAME and RDA better, the mapping from the official RDA elements to the BIBFRAME properties has started. The mapping brings out the need for local and detailed solutions of the differences in semantics. It will take a whole year to complete the mapping.

For more information, please contact Marja-Liisa marja-liisa.seppala@helsinki.fi

SHARE-VDE project

We are currently a full member of the Share-VDE. We are not planning on deploying the SVDE systems as such but are very interested in learning from them and getting new ideas. We also received recently a full conversion of Melinda data into BIBFRAME by SVDE and are now looking into it. Of particular interest is the extraction of Works from the MARC 21 records as doing that accurately is challenging.

For more information, please contact Matias matias.frosterus@helsinki.fi

Digital preservation

With centralized funding from the Ministry of Education and Science, CSC has created a digital preservation system for libraries, archives and museums funded by the ministry. Currently the archive contains about two petabytes of archive data.

The system is based on open source software, which has to a large extent developed locally. See <https://www.digitalpreservation.fi/en/node> for more information.

All data must be sent to the system in METS containers, which contain both the resource and metadata needed for rendering it. NLF has built workflows for materials harvested from the Finnish Web, other electronic legal deposit, and some digitized materials. Some workflows are still being developed. Current version of the digital preservation system guarantees bit level preservation via keeping five copies of each file in different storage systems and geographical locations (including one copy in a dark archive). Data is stored as OAIS Archival Information Packages (AIPs), self-explanatory containers. The ultimate aim is to preserve meaning, which will require migration of archived files, or emulation of the original usage environment. Functionalities and processes needed for this are under development, but AIPs already contain the metadata needed for e.g. migration of files into more modern formats.

For more information, please contact Juha (juha.hakala@helsinki.fi)

Shortly:

- From the July of 2022 NLF has a new director Kimmo Tuominen (<https://www.kansalliskirjasto.fi/en/news/kimmo-tuominen-assumes-position-national-librarian>)
- The National Library's Digitisation Programme 2021–2024 and Collections Policy published (<https://www.kansalliskirjasto.fi/en/news/national-librarys-digitisation-programme-2021-2024-and-collections-policy-published>)
- 25 million pages of history at digi.kansalliskirjasto.fi (<https://www.kansalliskirjasto.fi/en/news/25-million-pages-history-digikansalliskirjastofi>). All digitised resources are available at <https://digi.kansalliskirjasto.fi>.

NNG meeting 25th – 26th of April 2023 – Country Report from Sikt, Norway

Sikt

Sikt - Norwegian Agency for Shared Services in Education and Research was established on January 1st, 2022, through a merger between:

- NSD (Norwegian Centre for Research Data AS)
- Uninett AS
- Unit – the Directorate for ICT and Joint Services in Higher Education & Research

The organization is a public administrative body under the Ministry of Education and Research. Our mission is to help Education and Research achieve its goals by providing shared, value-adding services you can trust. Sikt has approximately 450 employees across its head office in Trondheim and additional offices in Bergen and Oslo.

The BIBSYS Consortium

The BIBSYS Consortium consists of 80 institutions with a total of 230 libraries spanning the following areas: Higher education in the private and public sector, research institutes, museums and hospitals.

The consortium has a shared catalogue of bibliographic metadata with holdings and items being managed on the institution level. The consortium collaborates on resource sharing, configuration and best practice workflows.

Day to day operations of the consortium are managed by Sikt and governed by a board. Board members are a representative selection of consortium members and are named by the Norwegian Digitization Board.

Library system



The consortium went live with Alma in 2016 and was among the first large consortiums to adopt Alma. As knowledge and experience with the system has grown, the need for support has gradually decreased with more complex and single-use use cases becoming a larger part of the daily support.

In general, the system covers most operational needs of the consortium members. A user satisfaction survey conducted in 2021, pinpointed working with electronic resources and system configuration as areas with the greatest challenges. As a result, Sikt has taken measures to explore better workflow and configuration standardization and created a temporary user group which will explore the major issues concerning e-resources.

The system supports RDA (in MARC) and the consortium started using RDA during 2019 in compliance with the central work done by the National Library of Norway. Sikt will continue to support this transition. Sikt are also collaborating with the University of Oslo and the National Library in exploring entity-based cataloguing.

GDPR, data privacy and data security are some of the main strategic areas related to the system and need to be balanced against the need to have an open system in regards of functionality and data. Sikt have participated in a GDPR task force consisting of Ex Libris customers in Europe, which has recommended actions for Ex Libris and customers to ensure GDPR compliance. Some fruits of this labour are currently being harvested, but there is still a way to go.

Consortias have needs which differentiate from single institution implementations of an LSP. Since 2022 Sikt have represented the BIBSYS consortium in a Community of Practice group established by IGeLU. The group has identified issues and areas of improvement specifically related to consortial functionality. In addition, the group is intended to be a forum for knowledge and experience sharing.

Sikt is also a member of the IGeLU Steering Committee and members of the consortium are represented in several different working groups within IGeLU.

The current contract between the consortium and Ex Libris for the delivery of Alma and Primo expires at the end of year of 2025. A process is under way to work in the next LSP contract. This will be covered in further detail below.

Discovery & delivery tool

Oria is based on Primo delivered by Ex Libris. Sikt provides central configuration and customization, but the institutions themselves can override the central configuration and customize their Oria instance according to their own preferences.

In addition to the standard application from Ex Libris, Sikt develops and maintains add-on functionality and services to meet the needs of the consortia.



The search system contains the entire BIBSYS Library Database with about 10 million records, in addition to the Primo Central Index (PCI) of electronic articles. Sikt has also added other local content and special collections; e.g. the institutional repositories, the authority registry and special collections from the University of Bergen and NTNU.

Universal design and compliance with WCAG 2.1 to at least the AA level has been a main focus the last years. A new law that came into force in February 2023 mandates that all services meet the WCAG 2.1 AA requirements. This will be a continuous ongoing effort and an area of focus as new versions of the products are released.

Reading lists

Sikt provides a solution for maintenance of and access to readings list for the educational institutions based on Leganto from Ex Libris. The solution is organized as a stand-alone consortium with 26 institutions.

There are currently more than 15.500 reading lists in the system and there has been more than 7.2 million reading-list-views¹. Verifying compliance with universal design and new legal requirements has been an important area related to the reading list solution.

There has also been established several integrations with other systems that are in use by the institutions, like the student information system (FS), archives, copyright clearance, and learning management systems in addition to Alma and Primo.

National open access repository

The Ministry of Education has released new guidelines to provide open access to research articles, to support EU's decision on full open access by 2020. The suggested guidelines states that deposit of a research article in an institutional repository is a prerequisite to be counted in the results-based financing.

In 2018 Sikt (then Unit) delivered a report to The Ministry about how such an archive could be realized. The report suggested establishing a National repository; Nasjonalt vitenarkiv (NVA). The Ministry of Education and Research asked Unit to establish NVA and Unit began the development during the fall of 2019.

¹ Figures from 2022



There has been some delay in the development of the system, but the system is now in use by 17 institutions. According to the project plan the majority of the institutions will start to migrate to NVA from the local repositories during the second half of 2023.

Semantic web, metadata and authority-files

Sikt has worked with a project to establish master data sources (authority—registries) for person, institutions/corporations, and projects to be used in research activity in Norway. This would include a new generic metadata platform (entity-register) to store, maintain and share all types of controlled vocabularies. Due to other priorities the project has been postponed, but it is still a long-term priority.

Local topic/subject authorities are the first metadata planned for the new platform. These authorities are currently maintained locally.

Authorities for people, corporations and conferences will be moved to the new entity registry. The plan is that the platform will form the base of the semantic web/linked data approach at Sikt.

The metadata is licensed with open licenses.

Sikt is also a discussion partner for the National Library of Norway regarding the creation of a national vault of metadata according to the National strategy for libraries 2020–2023².

A new contract and possible tender

As the current contract with Ex Libris is set to expire at the end of 2025, the work towards a new contract is well under way. In 2021 the user satisfaction survey and a PESTEL analysis was conducted. Then in 2022 we went through the forecasting stage of a scenario analysis and published a Request for Information (RFI). As part of the RFI, we gathered written replies and conducted meetings with interested vendors.

Further initiatives stemming from the RFI were meetings with other consortiums and with Marshall Breeding. Mr. Breeding is a journalist, consultant and author with significant knowledge of the library technology market.

² <https://www.regjeringen.no/en/dokumenter/national-strategy-for-libraries-2020-2023---a-space-for-democracy-and-self-cultivation/id2667015/>



The board of the consortium has named a steering committee for the project of acquiring a new or retaining the current LSP solution.

Sikt and the BIBSYS consortium are concerned with the dysfunctional market for ILS and LSP solutions. There are few options and very little competition. Will we see continued innovation allowing us to keep up with the technological advances and changes in needs and demands by our patrons? Will we be able to provide cost effective services in this market? These will be important questions in the coming months as the consortium decides on a provider for the next contract.



Landskerfi bókasafna

The ALMA Challenge

Implementing a new library system in Iceland

(see also National Report)

Sveinbjörg Sveinsdóttir,

Managing Director,

Consortium of Icelandic Libraries

NNG meeting Reykjavík 25 - 26 April 2023

Agenda

- Introduction
- Implementation of a new library system
- Sequence of implementation
- Discussions

Icelandic Library Characteristics

- A shared library system for approx. 300 libraries
- National Library System – **Gegnir**
- National Discovery Platform – **Leitir.is**
- The system is operated by Consortium of Icelandic Libraries (Landskerfi bókasafna hf.)

Consortium of Icelandic Libraries

- Founded as a public limited company in 2001.
- Purpose:
 - run and operate a national library system.
 - Provide solutions and services to libraries and museums (and archives) in Iceland
- Mission at the time:
 - To make the best possible use of Iceland's modest library and information resources.
 - To provide all users of Icelandic libraries with equal access to these resources over the Internet.
 - To implement a single, centrally run library system as the most cost-effective solution.
- *Name in Icelandic:* Landskerfi bókasafna hf.
 - Homepage: <https://landskerfi.is/>

Gegnir – Types of libraries

- Public Libraries
- Public Schools
- Medical Libraries
- Speciality Libraries
- Secondary Schools
- Universities
- National Library
- Government Libraries

The libraries vary greatly in size and needs differ
In total approx. 300 libraries



Invitation to Tender

No. 20781

Library management system

for Consortium of Icelandic Libraries

May 2018

2018 - 2020

June 2018: Opening of tenders:

- Innovative Interfaces
- Ex Libris

May 2019: Contract with Innovative signed

November 2020: Unexpected events resulted in Ex Libris taking over the Innovative contract

Result: Alma and Primo VE to be implemented

Contractual Enhancements (Library Indepence)

CIL-01: Managing circulation activities by circulation staff

CIL-02: User record management

CIL-03: Patron notifications

CIL-04: Patron registration

CIL-05: User API

CIL-06: Patron Library Card

January 2020 – Mid March 2022 (Covid pandemic)

- In this timeframe no In-Person meetings with vendors were possible
 - All contractual issues were dealt with in on-line meetings
 - Project Implementation work was carried out via Teams meetings and Basecamp communication
- Mid March 2022 Ex Libris agreed to send a consultant on-side to carry out training and consultancy

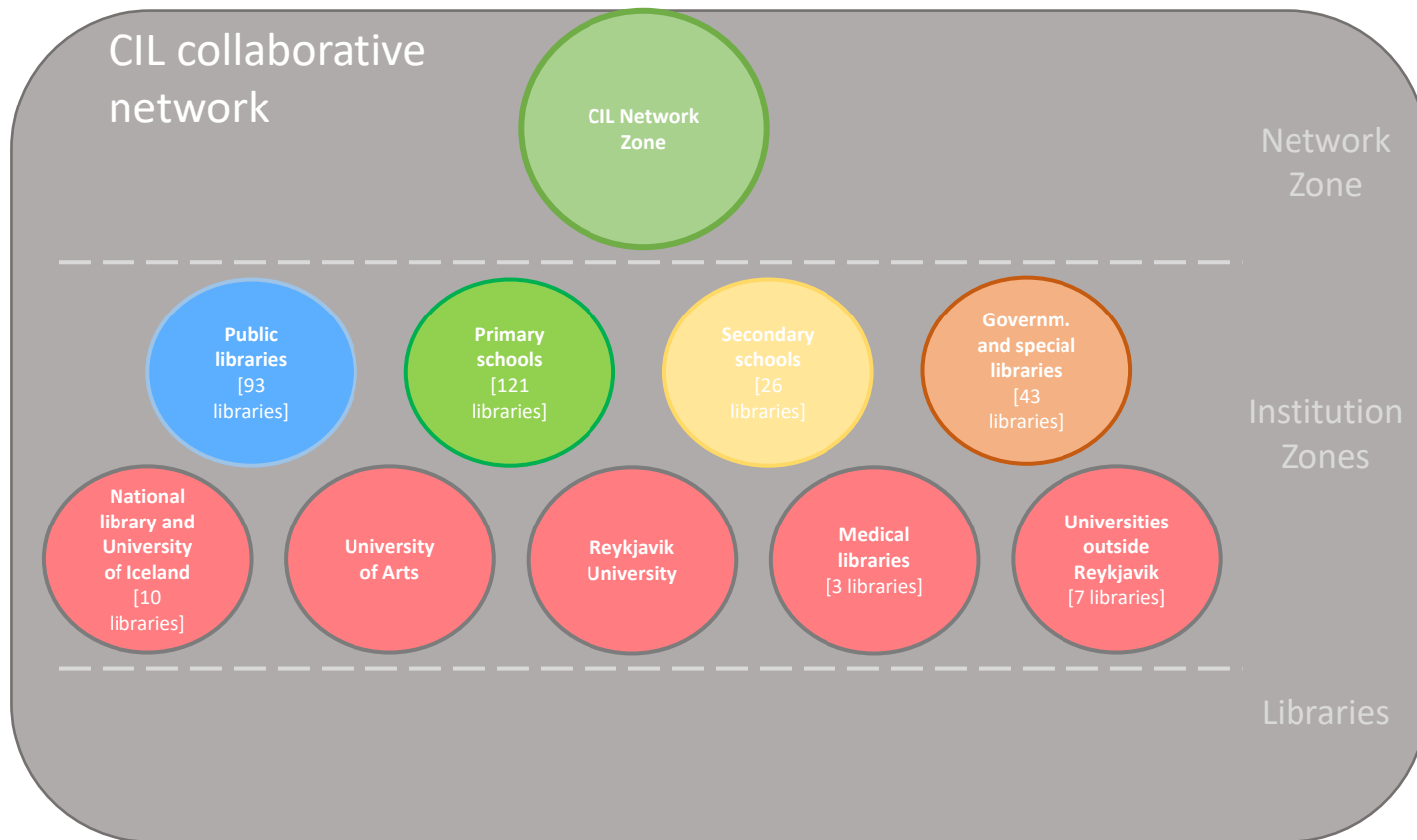
This caused additional workload on CIL staff and higher stress levels. It also did slow things down where direct communication would have been desired.

November 2020 – March 2021

No	HLD track no	Onboarding subject
ONB-01		Onboarding KO -> <i>done</i> 18 Nov 2020
ONB-02		Access to Alma and Primo VE Sandboxes
ONB-03		GTKA training
ONB-04		Detailed project plan
ONB-05		Project organisation
ONB-06	CIL-08	Alma&Primo VE topology
ONB-07	CIL-01	Managing circulation activities by circulation staff (s. Contract Annex H)
ONB-08	CIL-02	User record management (s. Contract Annex H)
ONB-09	CIL-03	Patron notifications (s. Contract Annex H)
ONB-10	CIL-04	Patron registration (s. Contract Annex H)
ONB-11	CIL-05	User API (s. Contract Annex H)
ONB-12	CIL-06	Patron Library Card (s. Contract Annex H)
ONB-13	CIL-07	Icelandic Language Support
ONB-14		UI localisation workflow
ONB-15		Data migration preparation
ONB-16		Primo VE - Session CIL vision for discovery and services for the Icelandic community
ONB-17		Primo VE - Review of current Primo configuration for transition to Primo VE
ONB-18		Primo VE - Review of external data sources
ONB-19		Primo VE - Review of specific service scopes
ONB-20		E-resources and CDI implementation
ONB-21		Specific library types like Public Libraries, Elementary school and set-up options
ONB-22		user management and authentication
ONB-23		3rd party integrations
ONB-24		Central services

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Topology: 1 Network Zone, 9 Alma/Primo Institutions



Project Organization

Project Managers:

- Dominic Nast (Georg Heiming) from Ex Libris
- Sveinbjörg Sveinsdóttir and Sigrún Hauksdóttir from the Consortium of Icelandic Libraries

Project Team at our end

- Brjánn Birgisson – Reykjavík City Library
- Hallfríður Kristjánsdóttir – National- and University Library
- Linda Rós Arnardóttir – Hafnarfjörður Public Library
- Telma Rós Sigfúsdóttir – National- and University Library

Many others participated and helped out

Ex Libris had a large project team

Steering Group

- Pálína Magnúsdóttir – Reykjavík City Librarian/CIL board
- Ingibjörg Steinunn Sverrisdóttir - National Librarian/CIL board
- Sveinbjörg Sveinsdóttir – Landskerfi bókasafna
- Ex Libris

Implementation - dates

- 4. November 2020 – Agreement with Ex Libris in place
- **18. November 2020** – Onboarding process started
- 16. March 2021 – Beginning of Implementation
- 9. May 2022 – Cataloguing and changes stopped in Aleph / Cutover to Alma starts
- 31. May 2022 – Aleph closed
- **13. June 2022** – Go-Live Alma (Gegnir)
- 14. Jun 2022 – Go-Live Primo VE (leitir.is)

One year and seven months

Onboarding – Major tasks

- Alma and Primo VE topology
- Specifications for enhancements
- Supporting Icelandic as a language
- Holistic User File
- Translating UI and messages into Icelandic
- Integration with island.is for authentication purposes

18.11 2020 – 16.3. 2021

March 2021 – June 2022

- Enhancement development
- Data migration in two phases
- Configuration
- Training CIL and key library staff
- Final Data migration
- Cutover
- Official Go-Live

Data migration

Data migrated from **11** Aleph units into an Alma Network Zone and **9** Institution Zones

- Complicated and not without consequences
 - Ex Libris “Migration engine” was strict and unforgiving
 - Decisions had to be made very fast – better Onboarding preparation would have been desirable.
-
- First migration – May 2021
 - Second migration – Oct./Nov 2021
 - Final migration – May 2022

Go-Live in phases

System rolled out in three phases to customers

- 1) Public libraries and National and University Library - June
- 2) Primary-, secondary-, university- and speciality libraries – August – September

This enabled us to divide workload for training and support – worked to a certain extent.

Possible as most schools close during summer.

NÝI GEGNIR HEFUR VERIÐ OPNAÐUR

13.06.2022

Stóra stundin er runnin upp. Nýja bókasafnakerfið, **nýi Gegnir** sem byggir á Alma hefur verið opnaður. Starfsmenn bókasafna geta því hafist handa við að nota kerfið fyrir útlán og skil. Allir þeir sem sóttu um starfsmannaaðgang að Alma fyrir lok 7. júní eru komnir með aðgang.

Á síðunni <https://landskerfi.is/kerfin/innleiding-almaprimo-ve/fyrsta-innskraning-i-alma-bokasafnskerfid/fyrsta-innskraning-i-alma> er að finna upplýsingar fyrir þá sem eru að skrá sig inn í fyrsta skipti. Einnig leiðbeiningar fyrir þá sem ekki hafa enn sótt um aðgang.



In Hindsight

- Complexity and needed work underestimated
- Time plan was very stringent and little flexibility – Heavy workload
- Large Group of stakeholders – Many parallel activities - Coordination was tricky
- Time consuming activities – Trial and error – User File – Migration and data mapping
- Staff privileges could not be migrated from Aleph
- Migration of Users (staff and patrons) and electronic materials proved troublesome
- Enhancements were ready late on the project
- More time for discussions and decision making would have been good

In Hindsight

User File

- All users are external users
- Sorting of Icelandic names
- Final “design” came late

Staff Users – **roles and privileges**

- Very cumbersome creation and maintenance
- Hindrance at system opening – not everybody had a user account! (final migration mess up)

Managed to meet project timeline against all odds

Challenges upon Go-Live

- Staff Users – roles and privileges
- Training
- Supporting library staff with 8 staff at CIL
- Printing - > SpineOMatic improvements done by CIL
- Patron Letters
- Checkout web for school libraries - > CIL development

Printing

Cloudapp **SpineOMatic** did not meet needs

„Enable marginless templates and layout“

- Margins and layout
- Printing of multiple labels at same time



Children checkout web in schools

Sjálfsafgreiðsluvél

1

Skannaðu nafnið þitt.

Strikamerki



2

Hæ Íris Alda Ísleifsdóttir!
Skannaðu bókina.

Strikamerki



Í útláni:

Útlánsdagur:
5.10.2022

Skiladagur: 4.11.2022

Blyton, Enid,
Fimm í ævintýraleit / Enid Blyton ;
[Kristmundur Bjarnason íslenskaði] ; ...
myndir eftir Eileen A. Soper.

213 Blyt Fim
16583925

Alma APIs used

Discussions

- Thank you

RDA in Norway

Oddrun Ohren and Bjørge Vestli
National Library of Norway

NNG meeting 25-26 April 2023

General status of RDA in Norway

- Implemented as cataloguing rules throughout the library sector
 - NLN & other academic libraries
 - Public libraries
 - Metadata companies
- Original toolkit + Marc21



Application profiles - motivation

- We already use RDA
- RDA toolkit will probably be deprecated before long
- New toolkit assumes RDA ontology (i.e. not Marc)
 - Documentation of practise needed
 - Practical help for cataloguers needed

... which is where Application profiles come in

Working with application profiles – starting point

- RDA's definition of 'application profile':

A specification of the [metadata that is used in an application](#).

A specification may include the [entities](#), [elements](#), and [vocabulary encoding schemes](#) that are used, and the [mandatory](#) and [repeatable](#) status of elements.

[\[RDA Toolkit Glossary\]](#)

- Various resources developed by others:
 - Melissa Parent: [A Primer on RDA Application Profiles](#) & [Webinar on Youtube](#)
 - Work on application profiles at DNB: [Presentation by Renate Behrens](#)
 - ...
- Documented cataloguing practice (for Marc21)



Challenges

- The large number of RDA elements to consider
- No really efficient browsing facility available
- Granularity & hierarchical structure of the RDA properties
- Unclear relationship between AP and RDA toolkit

RDA entity properties	30
Agents properties:	1053
Work properties	608
Expression properties	516
Manifestation properties	410
Item properties	122
Nomen properties	174
Place properties	54
Timespan properties	58
SUM	3025

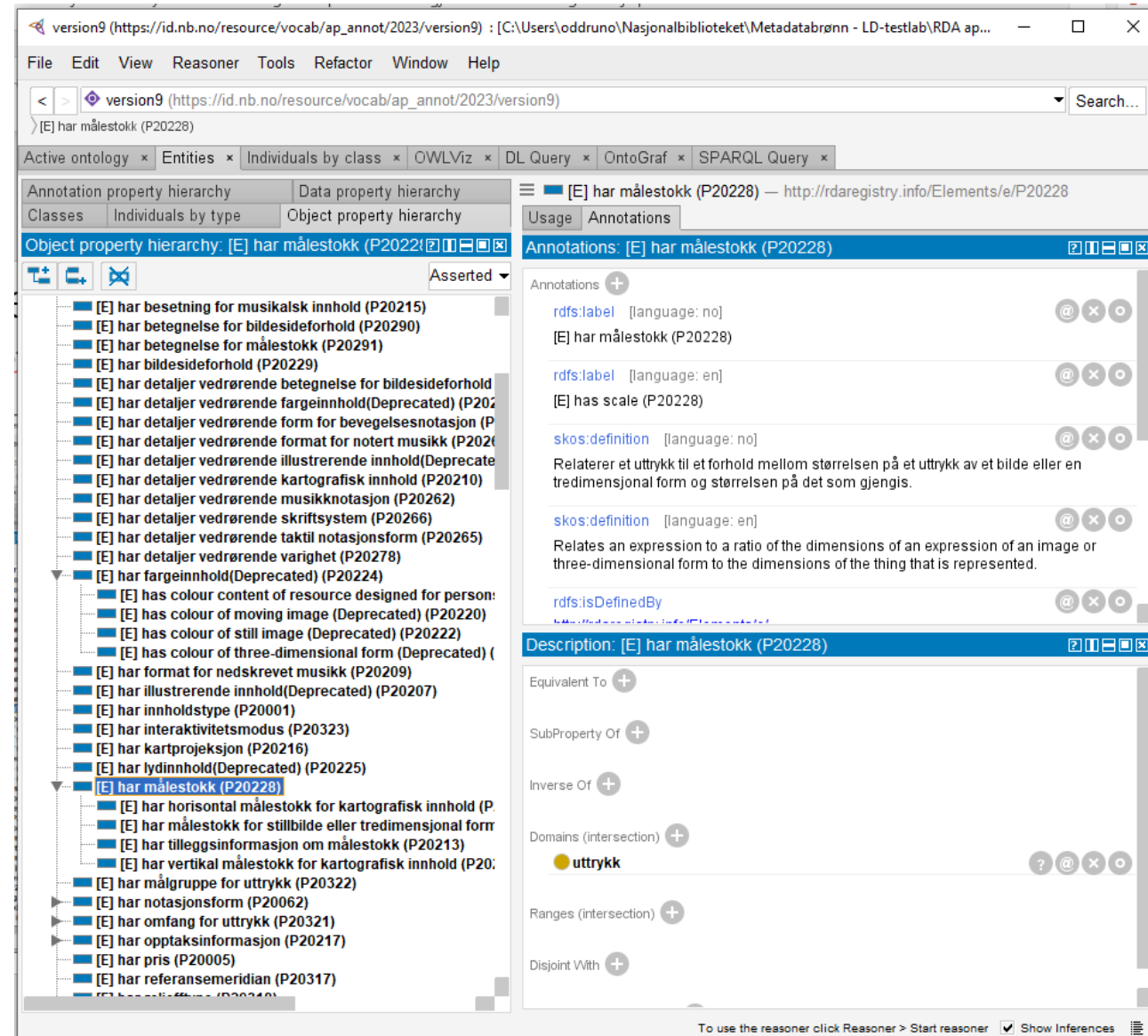
Approach

- Restrict our scope:
 - Initially focus on properties of 'bibliographical' entity types: Work, Expression and Manifestation
- Process the RDA ontology into a (bit) smaller and more navigable structure
- Conceptualize the notion of 'application profile'

RDA entity properties	30
Agents properties:	1053
Work properties	608
Expression properties	516
Manifestation properties	410
Item properties	122
Nomen properties	174
Place properties	54
Timespan properties	58
SUM	3025

Making RDA more navigable

- Adapting the RDA ontology for loading into Protégé
- Create an annotation scheme for encoding the AP attributes prescribed by RDA
- Identifying properties that can be ignored during the (manual) work with the Aps
- Exporting the ontology to spreadsheet



RDA vocabulary exported from Protégé

						Full bokm	E-bokm	Lydb	CDRO	Musi			
hierKey	Egenskap	EgenskapNavn	Domene	Verdimengd	Invers egenskap	al	al	I	ma	I	ma	Full bokm	
1	http://rdaregistry.info/Elements/x/P00015	[X] har note om RDA-entitet (P00015)	RDA-entitet										
1x1	http://rdaregistry.info/Elements/m/P30137	[M] har note om manifestasjon (P30137)	manifestasjon			X						500 [] [a]	
1x1x1	http://rdaregistry.info/Elements/m/P30050	[M] har note om hefte, del, eller versjon brukt som grunnlag for manifestasjon				X	X		X			588 [#.] [a]	
1x1x2	http://rdaregistry.info/Elements/m/P30052	[M] har note om distribusjonangivelse (P30052)	manifestasjon			X						500 [] [a]	
1x1x3	http://rdaregistry.info/Elements/m/P30053	[M] har note om framstillingsangivelse (P30053)	manifestasjon			X						500 [] [a]	
1x1x8	http://rdaregistry.info/Elements/m/P30059	[M] har note om tidspunkt for copyright (P30059)	manifestasjon			X						500 [] [a]	
1x1x9	http://rdaregistry.info/Elements/m/P30062	[M] har note om nummerering av sekvens (P30062)	manifestasjon			X						500 [] [a]	
1x1x10	http://rdaregistry.info/Elements/m/P30063	[M] har note om tittel (P30063)	manifestasjon			X						500 [] [a]	
1x1x11	http://rdaregistry.info/Elements/m/P30064	[M] har note om utgaveangivelse (P30064)	manifestasjon			X						500 [] [a]	
1x1x12	http://rdaregistry.info/Elements/m/P30214	[M] har note om bærer (P30214)	manifestasjon			X						500 [] [a]	
1x1x12x1	http://rdaregistry.info/Elements/m/P30051	[M] har note om endringer i bæreregenskapene (P30051)	manifestasjon			X						500 [] [a]	
1x1x12x2	http://rdaregistry.info/Elements/m/P30060	[M] har note om manifestasjonens størrelse (P30060)	manifestasjon			X						500 [] [a]	
1x1x12x3	http://rdaregistry.info/Elements/m/P30061	[M] har note om manifestasjonens omfang (P30061)	manifestasjon			X						500 [] [a]	
1x1x13	http://rdaregistry.info/Elements/m/P30260	[M] har note om identifikator for manifestasjon (P30260)	manifestasjon			X						500 [] [a]	
1x2	http://rdaregistry.info/Elements/e/P20071	[E] har note om uttrykk (P20071)	uttrykk			X						500 [] [a]	
1x2x1	http://rdaregistry.info/Elements/e/P20010	[E] har note om endringer i innholdsegenskapene (P20010)	uttrykk			X						500 [] [a]	
1x3	http://rdaregistry.info/Elements/w/P10330	[W] har note på verk (P10330)	verk			X						500 [] [a]	
1x3x1	http://rdaregistry.info/Elements/w/P10402	[W] har note om metadataverk (P10402)	verk			X						500 [] [a]	
1x4	http://rdaregistry.info/Elements/i/P40028	[I] har note om eksemplar (P40028)	eksemplar			X						500 [] [a]	
1x4x1	http://rdaregistry.info/Elements/i/P40003	[I] har endring for eksemplar (P40003)	eksemplar			X						500 [] [a]	
1x4x2	http://rdaregistry.info/Elements/i/P40010	[I] har note om eksemplarets størrelse (P40010)	eksemplar			X						500 [] [a]	
1x4x3	http://rdaregistry.info/Elements/i/P40011	[I] har note om eksemplarets omfang (P40011)	eksemplar			X						500 [] [a]	
2	http://rdaregistry.info/Elements/x/P00014	[X] er emne RDA-entitet for (P00014)	RDA-entitet	verk	[W] har emne RDA-entitet (P10324)								
2x1	http://rdaregistry.info/Elements/x/P00025	[X] er RDA-entitet beskrevet i (P00025)	RDA-entitet	verk	[W] er beskrivelse av RDA-entitet (P10360)								
2x1x1	http://rdaregistry.info/Elements/x/P00030	[X] is RDA entity described with metadata by (P00030)	RDA-entitet	verk	[W] is metadata description of RDA entity (P10622)								
2x2	http://rdaregistry.info/Elements/x/P00026	[X] er RDA-entitet evaluert i (P00026)	RDA-entitet	verk	[W] er evaluering av RDA-entitet (P10361)								
2x2x1	http://rdaregistry.info/Elements/x/P00024	[X] er RDA-entitet kritisert i (P00024)	RDA-entitet	verk	[W] er kritikk av RDA-entitet (P10359)								
2x2x2	http://rdaregistry.info/Elements/x/P00027	[X] er RDA-entitet anmeldt i (P00027)	RDA-entitet	verk	[W] er anmeldelse av RDA-entitet (P10362)								
2x3	http://rdaregistry.info/Elements/m/P30253	[M] er emne for manifestasjon av (P30253)	manifestasjon	verk	[W] har emne (manifestasjon) (P10259)	X						500 [] [a]	
2x3x1	http://rdaregistry.info/Elements/m/P30254	[M] er manifestasjon beskrevet i (P30254)	manifestasjon	verk	[W] er beskrivelse av manifestasjon (P10271)	X						730 [.#, .2]	
2x3x1x1	http://rdaregistry.info/Elements/m/P30255	[M] er manifestasjon analysert i (P30255)	manifestasjon	verk	[W] er analyse av manifestasjon (P10272)	X						730 [.#, .2]	
2x3x1x2	http://rdaregistry.info/Elements/m/P30256	[M] er manifestasjon kommentert i (P30256)	manifestasjon	verk	[W] er kommentar til manifestasjon (P10276)	X						730 [.#, .2]	



What is 'application' in APs?

Work typology (tbc)

- Language-based works
- Musical work
- Moving image work
- Cartographic work
- Picture work
-

Work profile part

Application profile

Expression profile part

Manifestation profile part

Manifestation typology (tbc)

- Unmediated document
- Sound on physical carrier
- Image (moving and still) on physical carrier
- Computer files
- 3 dimensional object

- Alpha-numeric
- Musical notation
- Choregraphic notation
- Audio
- Picture
- Moving image
-

Expression typology (tbc)

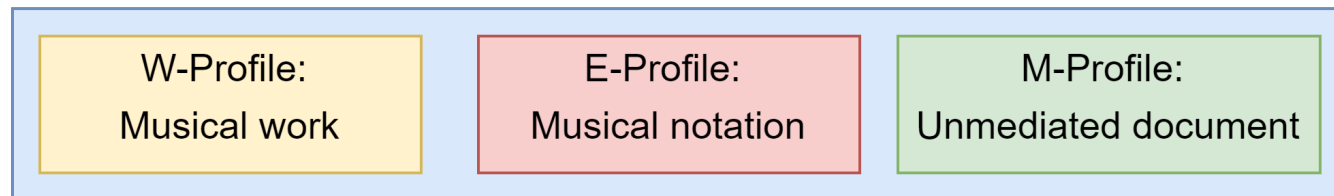
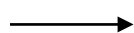


Examples of AP part combinations

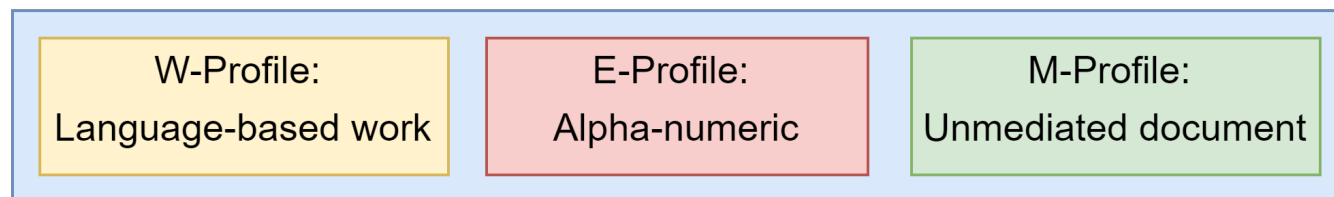
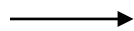
Profile for description of:



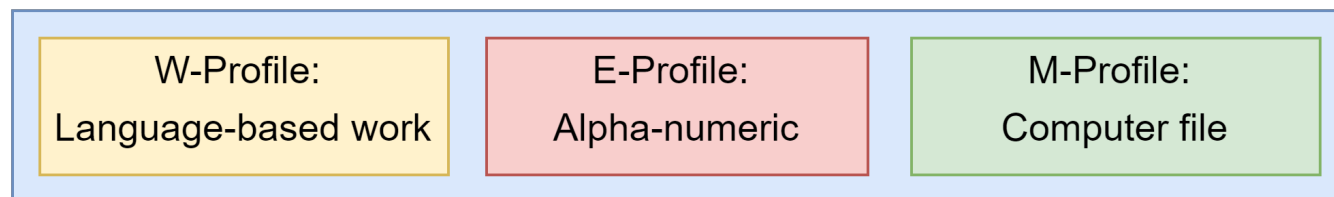
Printed sheet music



Printed books with written
language



E-books



Status and future work

- Complete the profile parts we have started on
- Testing them in practical use cases
- Adjust approach&method as necessary
- Developing guidance for users/cataloguers
 - Tools and documentation
- Implement into RDA Official Toolkit (how?)

Challenges

- Aggregating and diachronic works and expressions
- Practical tools for developers
- Bibliographic data based on RDA ontology vs. BIBFRAME data (from Share-VDE)
 - How to obtain interoperability?



Meteor

METadata Ekstraksjon fra Offentlige Rapporter

Oddrun Pauline Ohren

National Library of Norway

NNG meeting 25-26 April 2023

Background

- NLN has decided to cut down on manual cataloguing on gray material
 - For example reports from public institutions
- Institutions obliged to attach metadata when depositing their reports
 - Nothing added at NLN
 - No authority linking performed
- Metadata obligation makes institutions reluctant to deposit
 - Too laborious
 - Estimates indicate that less than 10% of said reports are deposited

Automatic metadata extraction

- Extraction of specific metadata elements from text pdfs:
- Elements currently extracted:
 - Author, title, year, publisher, ISBN, ISSN and language
- Source:
 - Pdftinfo (integrated metadata)
 - 5 first pages and 5 last pages of the pdf text
 - Language recognizer from Språkbanken
 - Norwegian bokmål and nynorsk, English, 3 Sami languages (Northern, Southern and Lule)

21/02746

FFI-RAPPORT

Uønsket utenlandsk påvirkning?

– kartlegging og analyse av stortingsvalget 2021

Eskil Grendahl Sivertsen
Lea Bjørgul
Håvard Lundberg ¹
Ingvild Endestad ¹
Tobias Bornakke ¹
Jakob Bæk Kristensen ²
Nicolai Meldgaard Christensen ³
Thomas Albrechtsen ³

¹ Analyse & Tall
² RUC/ Analyse & Tall
³ Common Consultancy

Lookup in authority file

Uønsket utenlandsk påvirkning?

– kartlegging og analyse av
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Thomas Albrechtsen ³

Forsvarets forskningsinstitutt (FFI)

¹ Analyse & Tall
² RUC/ Analyse & Tall
³ Common Consultancy

1. januar 2022

Emneord
Valgpåvirkning
Informasjonspåvirkning
Påvirkningsoperasjoner
Desinformasjon

FFI-rapport
21/02746

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5738

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Engelsk tittel
Unwanted foreign influence? Analysis of the Norwegian parliamentary elections 2021

Godkjennere
Stig Rune Sellevåg, *forskningsleder*
Janet Martha Blatny, *forskningsdirektør*

Dokumentet er elektronisk godkjent og har derfor ikke håndskreven signatur.

Opphavsrett
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Meteor

- Uses Python and a pdf handling package PyMuPDF
- Plan to integrate Meteor with our ingest system for digital deposit
 - → semiautomized workflow from deposit to marc-record-in-catalogue.
- Still in the experimental phase
 - Manual evaluation of 250 reports: Results promising

.....slide pool (In Norwegian).....

Arbeidsmetode så langt

- Skaffe oss **oversikt over** og **innsikt i** RDA-vokabularet
- Utarbeide et brukbart arbeidsverktøy for vurdering av RDA-relasjonene (regneark)
 - Begrense oss til relasjonene man faktisk trenger å vurdere manuelt
- «Modellering» av **begrepet applikasjonsprofil** (Bjørge)

Oversikt over RDA: Protégé – et ontologiverktøy

Desktop-versjon

The screenshot shows the Protégé Desktop version interface. The top menu bar includes File, Edit, View, Reasoner, Tools, Refactor, Window, and Help. The main window displays the ontology hierarchy on the left, with the selected property '[E] har målestokk (P20228)' highlighted. The right pane shows the details for this property, including its IRI, annotations, and domain/range information.

version9 (https://id.nb.no/resource/vocab/ap_annot/2023/version9) : [C:\Users\oddruno\Nasjonalbiblioteket\Metadatabrønn - LD-testlab\RDA ap...

File Edit View Reasoner Tools Refactor Window Help

version9 (https://id.nb.no/resource/vocab/ap_annot/2023/version9) Search...

[E] har målestokk (P20228)

Active ontology x Entities x Individuals by class x OWLViz x DL Query x OntoGraf x SPARQL Query x

Annotation property hierarchy Data property hierarchy

Classes Individuals by type Object property hierarchy

Object property hierarchy: [E] har målestokk (P20228) [E] har målestokk (P20228)

Annotations [E] har målestokk (P20228)

Annotations +

rdfs:label [language: no]
[E] har målestokk (P20228)

rdfs:label [language: en]
[E] has scale (P20228)

skos:definition [language: no]
Relaterer et uttrykk til et forhold mellom størrelsen på et uttrykk av et bilde eller en tredimensjonal form og størrelsen på det som gjengis.

skos:definition [language: en]
Relates an expression to a ratio of the dimensions of an image or three-dimensional form to the dimensions of the thing that is represented.

rdfs:isDefinedBy
http://rdaregistry.info/Elements/e/P20228

Description: [E] har målestokk (P20228)

Equivalent To +

SubProperty Of +

Inverse Of +

Domains (intersection) +
uttrykk

Ranges (intersection) +

Disjoint With +

To use the reasoner click Reasoner > Start reasoner Show Inferences

WebProtégé

The screenshot shows the WebProtégé interface. The top menu bar includes Display, Project, Share, Olufine, and Help. The main window displays the ontology hierarchy on the left, with the selected property '[E] har målestokk (P20228)' highlighted. The right pane shows the details for this property, including its IRI, annotations, and domain/range information.

version9 Home

Classes Properties Individuals Comments Changes by Entity History Add tab

Property Hierarchy

Object Properties Data Properties Annotation Properties

[E] har detaljer vedrørende varighet (P20278)
[E] har fargeinnhold(Deprecated) (P20224)
[E] har format for nedskrevet musikk (P20209)
[E] har illustrerende innhold(Deprecated) (P20207)
[E] har innholdstype (P20001)
[E] har interaktivitetsmodus (P20323)
[E] har kartprojeksjon (P20216)
[E] har lydinnhold(Deprecated) (P20225)
[E] har målestokk (P20228)
[E] har horisontal målestokk for kartografisk innhold (P20228)
[E] har målestokk for stillbilde eller tredimensjonal form (P20228)
[E] har tilleggsinformasjon om målestokk (P20213)
[E] har vertikal målestokk for kartografisk innhold (P20228)
[E] har målgruppe for uttrykk (P20322)
[E] har notasjonsform (P20062)
[E] har omfang for uttrykk (P20321)
[E] har opptaksinformasjon (P20217)
[E] har pris (P20005)
[E] har referansemeridian (P20317)
[E] har reliefftype (P20318)
[E] har sammendrag av innhold (P20069)
[E] har språk i uttrykk (P20006)
[E] har supplerende innhold(Deprecated) (P20206)
[E] har tilrettelagt innhold(Deprecated) (P20208)
[E] har toneart for uttrykk (P20326)
[E] har versjonsbetegnelse (P20572)
[E] has artistic and/or technical credit (Deprecated) (P20007)
[E] has colour (P20573)
[E] has language of content (Deprecated) (P20007)
[E] has other distinguishing characteristic of expression (Deprecated) (P20007)
[E] has performer, narrator, and/or presenter (Deprecated) (P20007)
[I] har adgangsbegrensning for eksemplarer (P40047)
[I] har direkte kilde for anskaffelse av eksemplarer (P40050)

Property: [E] har målestokk (P20228)

IRI
http://rdaregistry.info/Elements/e/P20228

Annotations

rdfs:label [E] has scale (P20228) en

skos:definition Relates an expression to a ratio of the dimensions of an expression of an image or three-dimensional form to the dimensions of the thing that is represented. en

skos:scopeNote Scale can apply to horizontal, vertical, angular, or other measurements represented in an expression. en

rdfs:label [E] har målestokk (P20228) no

skos:definition Relaterer et uttrykk til et forhold mellom størrelsen på et uttrykk av et bilde eller en tredimensjonal form og størrelsen på det som gjengis. no

rdfs:isDefinedBy http://rdaregistry.info/Elements/e/ lang

fra Bokmalen 500 [a] no

fra Kartmalen 255 [a, b, c] no

fra Kartmalen 034 [0#, 1#, 3#] [a, b, c, d, e, f, g, 2] no

skos:scopeNote Målestokk kan gjelde horisontale eller vertikale mål eller vinkelmål, eller andre mål som gjengis i et uttrykk. no

Enter property Enter value lang

Domain
uttrykk

Enter a class name

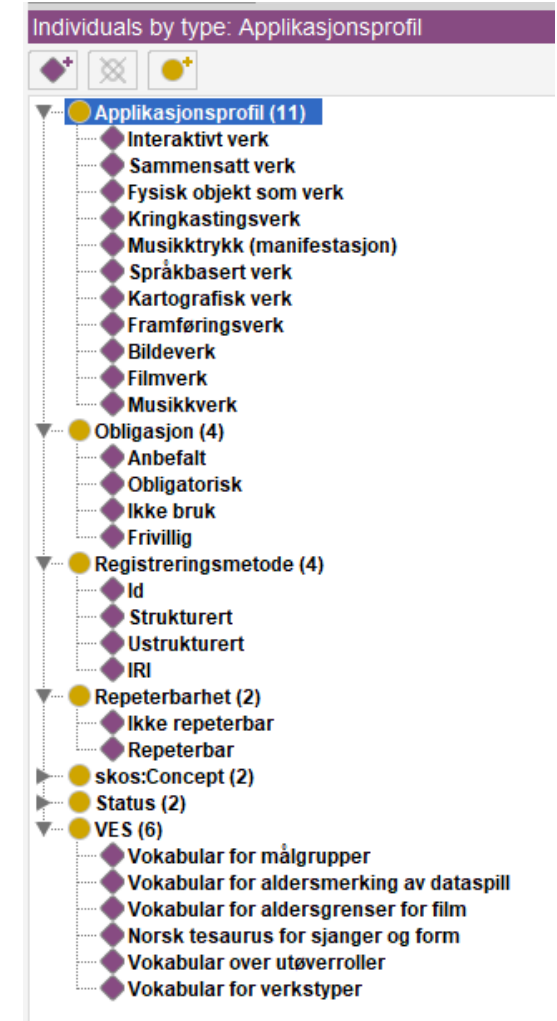
Range

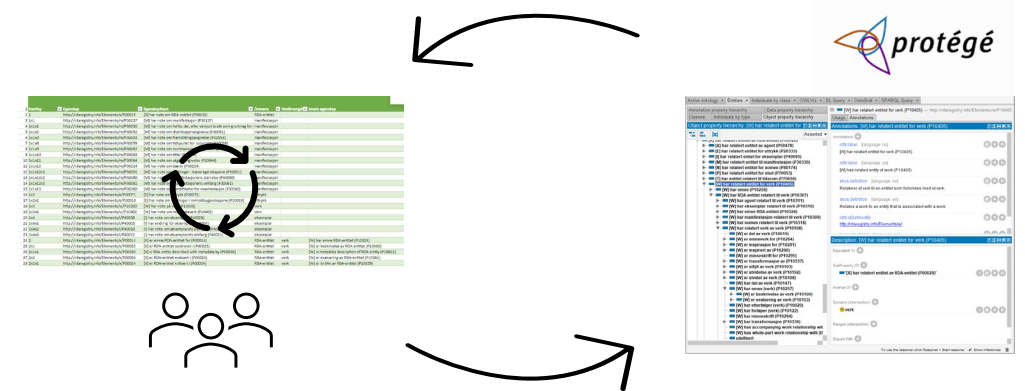
Tilpasning til Protégé

- OWL (Web Ontology Language)
 - RDA-relasjoner: `rdf:Property` → `owl:ObjectProperty`
- Redusere størrelsen på vokabularet som lastes inn
 - For hver RDA-relasjon:
 - Fjernet alle egenskaper fra `rdatoolkit:` og `reg:`
 - Fjernet alle etiketter, definisjoner og noter på andre språk enn `no` og `en`
 - Lastet ikke inn underinndelingene som skiller mellom objekt- og datatype-versjonen av relasjonen
 - Forklares senere
- Forbedre visuell navigasjon
 - For hver RDA-relasjon:
 - Berike etikett med `prefiks` som angir `domene`
 - Berike etikett med `suffiks` som angir `ID`
 - Eksempel:
 - [E] har omfang for uttrykk (P20321)
 - [W] er utvidelse av verk (P10192)
 - [X] har relatert verk til RDA-entitet (P00002)

Annotering av RDA-relasjonene

- Informasjon om tilhørighet til applikasjonsprofiler
 - Obligasjon, repeterbarhet, registreringsmetode, etc
- Mappering til NBs katalogiseringsveiledninger
 - Basert på [Map from RDA properties to MARC 21 Bibliographic encodings](#)
- Ad hoc informasjon
 - F.eks. tilhørighet til navngitte utvalg
- Aktuelle annoteringsmetoder for ulike annoteringer:
 - Innlesing fra regneark
 - Maskinelt
 - Bulk-editering i WebProtégé





Eksport fra Protégé til regneark/arbeidsverktøy

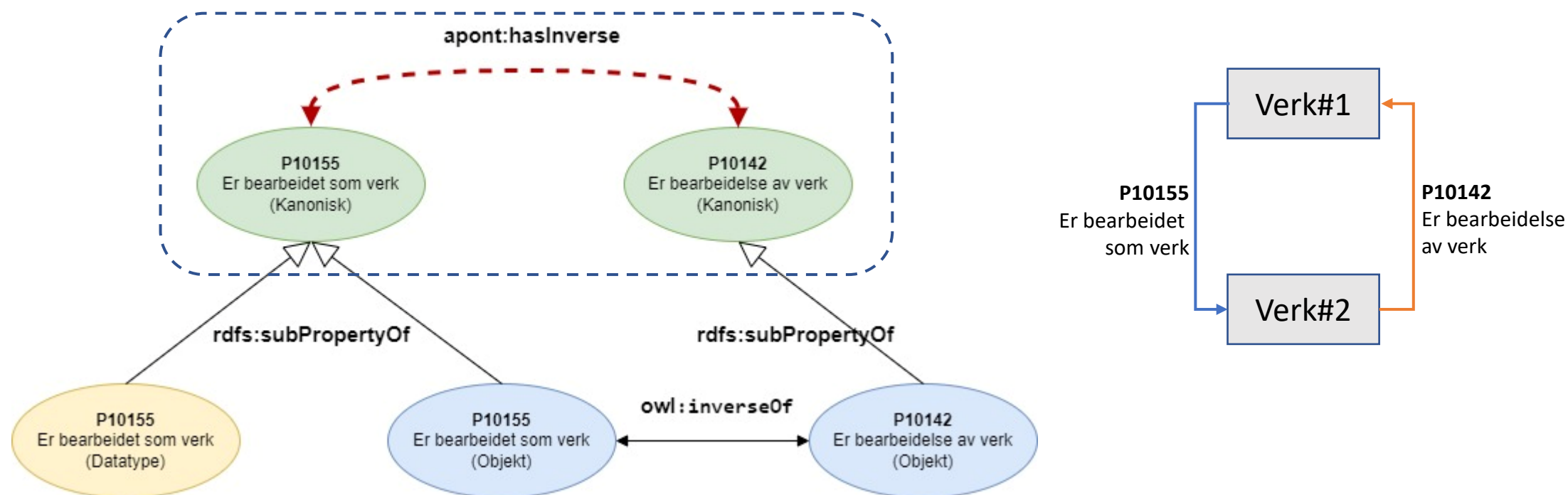
- Mål:
 - Liste opp relasjonene i kontekst (**bevare hierarkiet**)
 - Bare relasjoner fra bibliografiske entitetstyper
 - Inkludere «like» relasjoner i minst mulig grad
 - Få med informasjon om **inverse relasjoner**
- Metode:
 - Begrense oss til relasjoner **fra** XWEMI entitetstyper
 - Relasjoner **fra agent (inkl. alle subtyper)**, **place**, **timespan** og **nomen** er ikke med
 - «autoritetsentiteter»
 - «Kodifisere» hierarkiet i egen kolonne
 - Utfordring: **Polyhierarki** på flere nivåer medfører mange gjentakelser
 - Ta hensyn til kjente **mønstre** i RDA-vokabularet
 - Identifisere og utelate **redundante** relasjoner
 - = relasjoner som er «like» mht hvordan de vurderes for applikasjonsprofiler

Mønster i RDA-relasjoner (1)

- Samme relasjon (semantisk sett) er i mange tilfeller representert ved 3 separate relasjoner.
- Disse har samme ID, men hver sin URI.
 - URI-ene til hvilken som helst av dem kan utledes av de andre
 - Kanonisk relasjon
 - Objekt-relasjon
 - Datatype-relasjon
- [W] er bearbeidet som verk (P10155): <http://rdaregistry.info/Elements/w/P10155>
 - {Verk} ↦ uspesifisert
 - [W] er bearbeidet som verk (P10155): <http://rdaregistry.info/Elements/w/object/P10155>
 - {Verk} ↦ {Verk}
 - [W] er bearbeidet som verk (P10155): <http://www.rdaregistry.info/Elements/w/datatype/P10155>
 - {Verk} ↦ uspesifisert

Inverse RDA-relasjoner

- **Utfordring:** Inverse relasjoner finnes bare på Objekt-nivå
 - Utelatelse av disse fjerner informasjonen om inverse relasjoner
- **Løsning:** Representere inverse relasjoner som **annotering på kanonisk nivå**



Mønster i RDA-relasjoner (2)

Det er definert separate relasjoner - av **semantisk** sett **samme relasjon** – til de ulike subtypene av Agent

- [M] har **skaper av manifestasjon** (**agent**) (P30329)
 - [M] har **skaper av manifestasjon** (**kollektiv agent**) (P30392)
 - [M] har **skaper av manifestasjon** (**familie**) (P30450)
 - [M] har **skaper av manifestasjon** (**korporasjon**) (P30421)
 - [M] har **skaper av manifestasjon** (**person**) (P30363)

For alle forekomster av dette mønstret er bare relasjonen til **agent** eksportert.

Eksport av RDA vocabulary i Protégé → regneark

Inkludert mapping til NBs katalogiseringsveiledninger

hierKey	Egenskap	EgenskapNavn	Domene	Verdimengd	Invers egenskap	Full bokm	E-bokm	Lydb	CDRO	Musi	Full bokm
						al	al	I	ma	I	ma
1	http://rdaregistry.info/Elements/x/P00015	[X] har note om RDA-entitet (P00015)	RDA-entitet								
1x1	http://rdaregistry.info/Elements/m/P30137	[M] har note om manifestasjon (P30137)	manifestasjon			X					500 [] [a]
1x1x1	http://rdaregistry.info/Elements/m/P30050	[M] har note om hefte, del, eller versjon brukt som grunnlag for manifestasjon	manifestasjon			X	X		X		588 [#.] [a]
1x1x2	http://rdaregistry.info/Elements/m/P30052	[M] har note om distribusjonangivelse (P30052)	manifestasjon			X					500 [] [a]
1x1x3	http://rdaregistry.info/Elements/m/P30053	[M] har note om framstillingsangivelse (P30053)	manifestasjon			X					500 [] [a]
1x1x8	http://rdaregistry.info/Elements/m/P30059	[M] har note om tidspunkt for copyright (P30059)	manifestasjon			X					500 [] [a]
1x1x9	http://rdaregistry.info/Elements/m/P30062	[M] har note om nummerering av sekvens (P30062)	manifestasjon			X					500 [] [a]
1x1x10	http://rdaregistry.info/Elements/m/P30063	[M] har note om tittel (P30063)	manifestasjon			X					500 [] [a]
1x1x11	http://rdaregistry.info/Elements/m/P30064	[M] har note om utgaveangivelse (P30064)	manifestasjon			X					500 [] [a]
1x1x12	http://rdaregistry.info/Elements/m/P30214	[M] har note om bærer (P30214)	manifestasjon			X					500 [] [a]
1x1x12x1	http://rdaregistry.info/Elements/m/P30051	[M] har note om endringer i bæreregenskapene (P30051)	manifestasjon			X					500 [] [a]
1x1x12x2	http://rdaregistry.info/Elements/m/P30060	[M] har note om manifestasjonens størrelse (P30060)	manifestasjon			X					500 [] [a]
1x1x12x3	http://rdaregistry.info/Elements/m/P30061	[M] har note om manifestasjonens omfang (P30061)	manifestasjon			X					500 [] [a]
1x1x13	http://rdaregistry.info/Elements/m/P30260	[M] har note om identifikator for manifestasjon (P30260)	manifestasjon			X					500 [] [a]
1x2	http://rdaregistry.info/Elements/e/P20071	[E] har note om uttrykk (P20071)	uttrykk			X					500 [] [a]
1x2x1	http://rdaregistry.info/Elements/e/P20010	[E] har note om endringer i innholdsegenskapene (P20010)	uttrykk			X					500 [] [a]
1x3	http://rdaregistry.info/Elements/w/P10330	[W] har note på verk (P10330)	verk			X					500 [] [a]
1x3x1	http://rdaregistry.info/Elements/w/P10402	[W] har note om metadataverk (P10402)	verk			X					500 [] [a]
1x4	http://rdaregistry.info/Elements/i/P40028	[I] har note om eksemplar (P40028)	eksemplar			X					500 [] [a]
1x4x1	http://rdaregistry.info/Elements/i/P40003	[I] har endring for eksemplar (P40003)	eksemplar			X					500 [] [a]
1x4x2	http://rdaregistry.info/Elements/i/P40010	[I] har note om eksemplarets størrelse (P40010)	eksemplar			X					500 [] [a]
1x4x3	http://rdaregistry.info/Elements/i/P40011	[I] har note om eksemplarets omfang (P40011)	eksemplar			X					500 [] [a]
2	http://rdaregistry.info/Elements/x/P00014	[X] er emne RDA-entitet for (P00014)	RDA-entitet	verk	[W] har emne RDA-entitet (P10324)						
2x1	http://rdaregistry.info/Elements/x/P00025	[X] er RDA-entitet beskrevet i (P00025)	RDA-entitet	verk	[W] er beskrivelse av RDA-entitet (P10360)						
2x1x1	http://rdaregistry.info/Elements/x/P00030	[X] is RDA entity described with metadata by (P00030)	RDA-entitet	verk	[W] is metadata description of RDA entity (P10622)						
2x2	http://rdaregistry.info/Elements/x/P00026	[X] er RDA-entitet evaluert i (P00026)	RDA-entitet	verk	[W] er evaluering av RDA-entitet (P10361)						
2x2x1	http://rdaregistry.info/Elements/x/P00024	[X] er RDA-entitet kritisert i (P00024)	RDA-entitet	verk	[W] er kritikk av RDA-entitet (P10359)						
2x2x2	http://rdaregistry.info/Elements/x/P00027	[X] er RDA-entitet anmeldt i (P00027)	RDA-entitet	verk	[W] er anmeldelse av RDA-entitet (P10362)						
2x3	http://rdaregistry.info/Elements/m/P30253	[M] er emne for manifestasjon av (P30253)	manifestasjon	verk	[W] har emne (manifestasjon) (P10259)	X					500 [] [a]
2x3x1	http://rdaregistry.info/Elements/m/P30254	[M] er manifestasjon beskrevet i (P30254)	manifestasjon	verk	[W] er beskrivelse av manifestasjon (P10271)	X					730 [.#, .2]
2x3x1x1	http://rdaregistry.info/Elements/m/P30255	[M] er manifestasjon analysert i (P30255)	manifestasjon	verk	[W] er analyse av manifestasjon (P10272)	X					730 [.#, .2]
2x3x1x2	http://rdaregistry.info/Elements/m/P30256	[M] er manifestasjon kommentert i (P30256)	manifestasjon	verk	[W] er kommentar til manifestasjon (P10276)	X					730 [.#, .2]

URN and other PIDs – recent developments and future plans

25.4.2023

Juha Hakala

NNG meeting, Reykjavik

Usage of PIDs is growing fast

- 8.2 billion ARKs have been assigned (8 billion in FamilySearch-service); there are more than 1000 user organizations
- 275 million DOIs, resolved billion times every month
 - There are more than 5000 user organizations and over 155.000 DOI prefixes
- URN 80 namespaces and growing
 - URN:NBN: 50 million identifiers in Germany (national library and 450 partners), 3 million in Finland
 - 13 countries use URN:NBNs, all of them in Europe
- Handle usage is growing fast (Internet of Things identifier in China)
- Nobody knows the total number of all assigned PIDs, but they are routinely used for scientific publications and data

Common targets for development

- Metaresolver – a service covering multiple PID systems
 - The best example so far: <http://n2t.net> covering all ARKs and many other identifiers (unfortunately future of the service is uncertain)
 - Challenge: poor interoperability between resolvers
- Common API for information retrieval and exchange
 - Resolvers will become smarter if they contain not only PID – URL pairs but also other metadata (see <https://www.rd-alliance.org/groups/pid-kernel-information-wg>)
 - There are APIs for Handle/DOI and the German National Library's URN resolver, but nothing is supported in more than one resolver
- New resolution services (semantics and syntax)
 - Currently every PID system has its own solution; is it possible to cooperate using e.g. the URN syntax?

Standardization (1/2)

- New edition of the DOI-standard: ISO 26434:2022
 - Retrospective Handle-DOI –conversion
- URN namespace URN:DOI has been registered for DOI
 - Every DOI can be presented and resolved as URN
 - <https://doi.org/urn:doi:10.1000/182>
- New version of the Handle specification Digital Object Identifier Resolution Protocol (DO-IRP) was published at summer 2022
 - Developed and hosted by The DONA Foundation, Sveitsi
 - Specifies not only the structure, syntax and character set of Handles (and DOIs), but also messages between the resolver and apps using it

Standardization (2/2)

- ARK-standardization stalled in IETF (there are 36 ARK Internet Drafts over 22 years, with no progress)
 - Possible solution: register URN namespace for ARK, and publish description of ARK system as informative IETF RFC
 - This is what was done with NBN, see; <https://www.iana.org/assignments/urn-formal/nbn> ja <https://www.rfc-editor.org/rfc/rfc8458.html>
- New URN namespaces (URN:DEV for IoT, URN:GVAT for Austria)
- Specification of URN R component semantics and syntax started
 - (e.g. listing of all URLs <URN>?+s=l2Ls, DC metadata ?+s=l2C&p=DC)
 - This became necessary when NLF started adding new services to the resolver

NNG and PIDs – a proposal

- A forum for exchanging information about PID usage
 - PID system usage (which systems, what is identified, assigned PIDs)
 - PID resolvers, and resolver related developments
- A platform for Nordic cooperation
 - Shared application development?
 - NLF has funding for URN resolver development 2023-2024, and direct links to standardization in IANA/IETF (in 2023)
 - Shared writing of specifications, such as APIs
- Is there a need for Nordic PID network, and if so, who should participate / be invited? And what would our role be?

PIDs in NLF (1)

- URN:NBN and URN:ISBN are in production
 - ISBN implementation covers just Finnish ISBNs (978-951 and 978-952)
- URN:ISSN implementation under construction with the ISSN International Centre
 - All URN:ISSN's must be resolved centrally, in the ISSN portal
- URN:META implementation is considered for the linked data model
 - An identifier for metadata elements; will resolve to multiple locations based on Web clients' language settings
 - Extension of current functionality of the NLF URN resolver
- Co-operation with the National Archive
 - Proposal to create a URN namespace for national archives, URN:NAN

PIDs in NLF (2)

- Two PID guides have been written (in Finnish)
 - Identification of electronic publications (incl. ARK, DOI, Handle, URN)
 - Identification of public identities (incl. ISNI, ORCID, ROR and RAiD)
- Guides present strengths and weaknesses of PID systems impartially; no attempt is made to claim that one system is better than others.
- DOI questionnaire (Spring 2023)
 - We want to find out if publishers etc. want new DOI services, in addition to those already provided in Finland

Other PID users in Finland

- Federation of Finnish Learned Societies assigns DOIs to articles in Journal.fi and monographs in Edition.fi
 - DOIs are from Crossref and identify works
 - URN:ISBN and URN:NBN will be used for manifestations
- CSC – IT Center for Science and its partners assign DataCite DOIs for datasets
- Several universities use Handles in their own DSpace installations, but only University of Helsinki has registered them

Use of PIDs at the National and University Library of Iceland

- Handles are used in three institutional repositories
 - Skemman.is – Bachelor's and Master's thesis
 - Opin Visindi – Dissertations and peer reviewed scientific articles.
 - Rafhladan.is – Digital legal deposit materials
- Some Opin Visindi resources have DOIs, assigned by the original publisher

Use of PIDs in Denmark

- DBC: At DBC we don't really work with PID's and resolvers. If an article that we create metadata for, is accessible via e.g. a DOI resolvable URL we include this URL in the marc record.

Use of PIDs in Latvia

- The National Library of Latvia (NLL) is using Handle system for DOI for scientific publications in our repository.
- NLL doesn't work with other PID's and resolvers.
- NLL would be interested in working for development of URN:ISBN and URN:NBN (still we even don't use NBNs).

Use of PIDs in Norway

- National Library of Norway
 - **URNs** for resources in our catalogue (nb.no and [Oria\(Alma\)](http://Oria(Alma))), managed by our ID service urn.nb.no
 - **Handles** for language resources in the Language bank (acquired from EPIC)
 - **URIs** (http) for vocabularies in nbvok

Use of PIDs in Norway

■ SIKT

- **Handles** used for entities in the BIBSYS authority file for persons, corporations and conferences (about 2.1 million handles)
- **Handles** considered for publications in Nasjonalt Vitenarkiv (NVA)
- Sikt is a Consortium Lead for a national consortium in DataCite (1st line support and administrative/economic) to provide **DOI's** for datasets
- Sikt is also a national Consortium Lead for **ORCID**
- NVA uses **ROR** as a persistent ID for organizations and are considering the use of **RaIDs** for research-projects

Use of PIDs in Sweden

- The National library of Sweden (KB) administrates URN:NBN on the national level
- KB offers a URN resolver (urn.kb.se)
- URIs for our base vocabulary (KBV), Swedish MARC terminology, subject headings et c can be found at id.kb.se

www.kansalliskirjasto.fi

Questions?

Implementation of RDA⁺ entities

- a picky approach

NNG

Reykjavik, April 25-26 2023

Types of entities

Only few of RDA's entities are considered relevant in a Danish context

- Works
- Persons
- Corporate Bodies

In addition to RDAs entities we have defined the following

- Data well works (a more slick term is desirable)
- Work groups
- Series and universes

These entities are registered as authority records in a MARC-format

Works

- according to RDA and IFLA LRM
- not aggregates

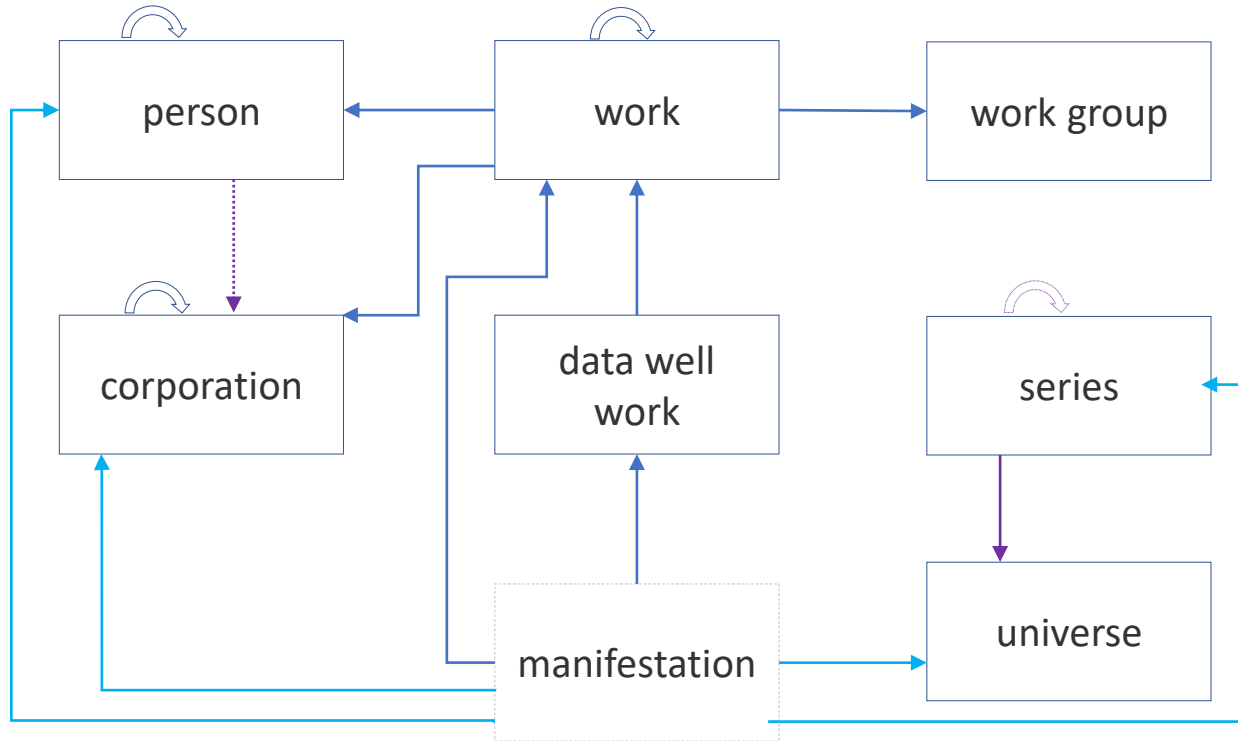
Data well works

- expression level but slightly different scope
- 1 data well work to represent the ordinary version in a given language, the large print version in a given language, the easy read version in a given language
- sheet music separated from recorded music
- spoken language in films = Danish -> a maximum of 2 data well works

Work groups

- gather works that are regarded as the same

Datamodel



Work – or not?

- Not works for every material type or in every situation
- **Selective approach** – both in future cataloguing and in reconciliation processes
- Works only **when we expect more than one manifestation**

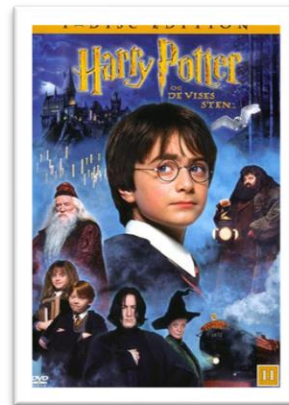
General exceptions include

- Articles from newspapers and magazines incl. reviews
- Anniversary publications
- Exhibition catalogues
- Academic works, scientific reports, conference papers
- Yearbooks

Work boundaries – different works

1) Material type

e.g. the **book** Harry Potter and the Philosopher's Stone is one work, whereas the **movie** is another work and **the computer game** is a third work



2) Form of work

e.g. the **book** The Golden Compass is one work, whereas the **graphic novel** is another work

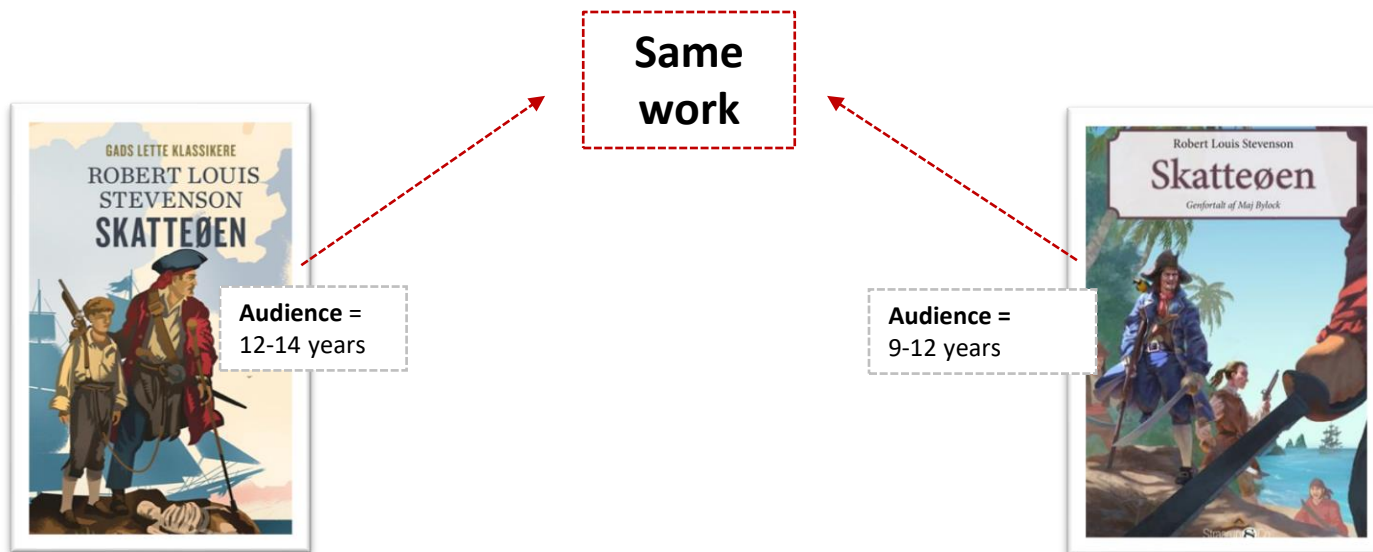


3) Audience

e.g. the book Oliver Twist for **adults** is one work, whereas the adaptation for **children** is another

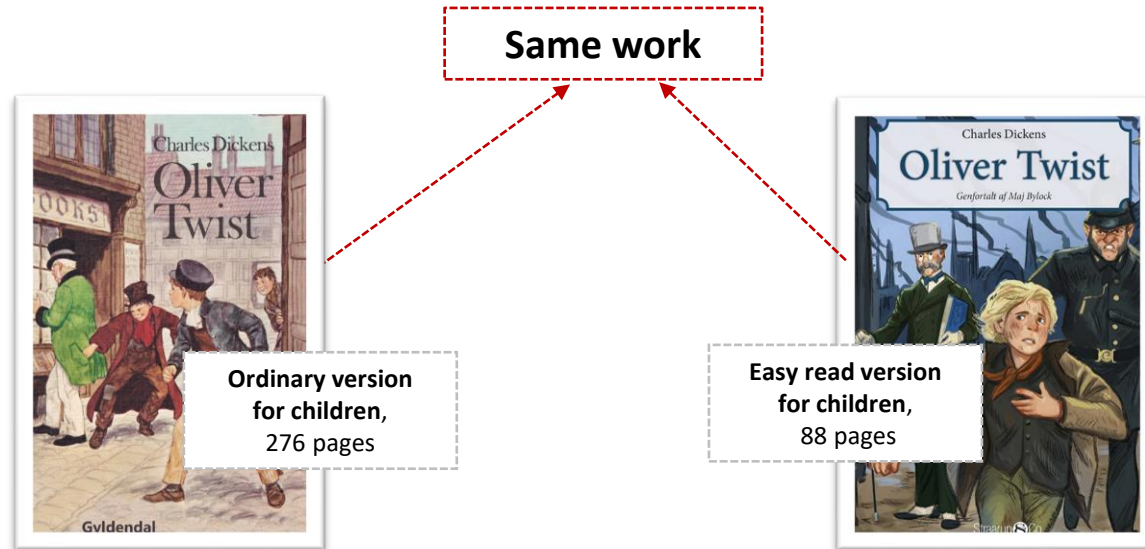
Work boundaries – same work

different versions of children's books, e.g. *Treasure Island* by Robert Louis Stevenson:



Work boundaries – same work

easy read versions of children's books, e.g. *Oliver Twist* by Charles Dickens:



Work boundaries – same work

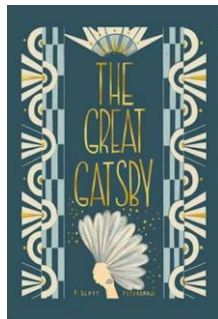
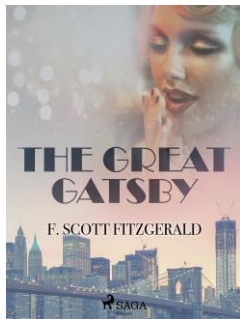


Same work ... but different data well works

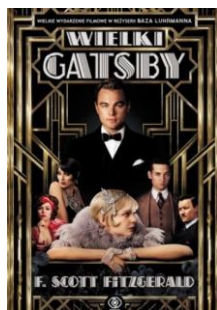
Every language version is a specific data well work

Same work

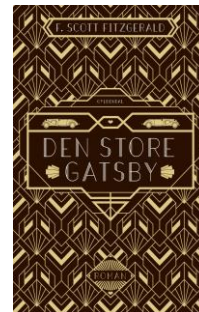
English dw work



Polish dw work



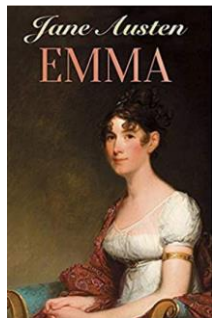
Danish dw work



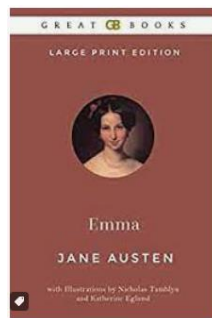
Other data well works

Same work

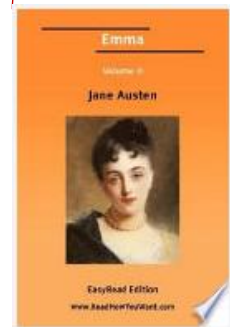
English dw work



English large print dw work



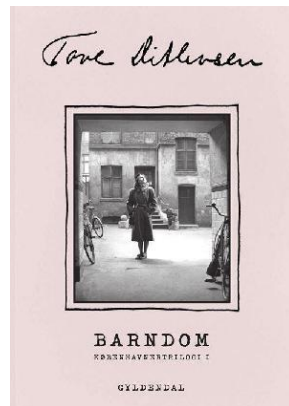
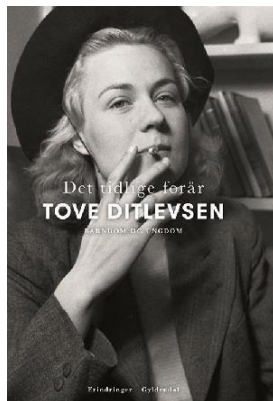
English easy read dw work

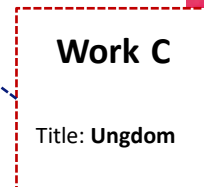
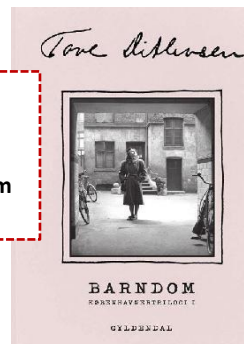
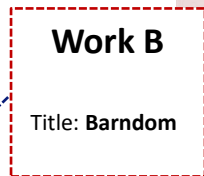
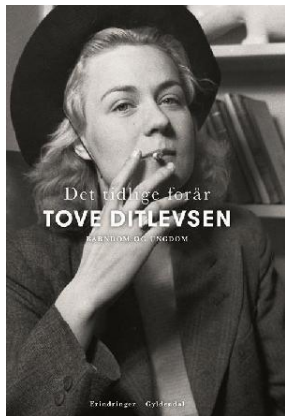


Individual works published in a collection

Works which are first published as parts in a collection and later on as separate works pose a challenge. For example the memoirs of writer Tove Ditlevsen, which was first published as ***Det tidlige forår*** and later separately as: ***Barndom*** and ***Ungdom***.

(She later wrote and published **Gift**, about her adult life and marriages)



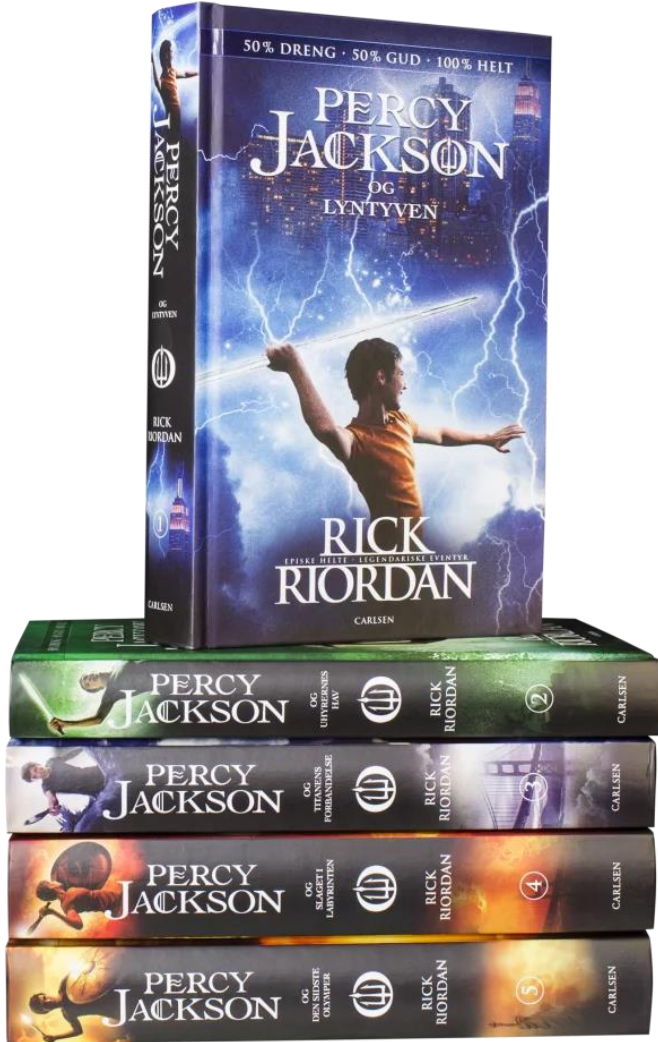


is part of

is part of

has prequel

has prequel



Other non-RDA entities:

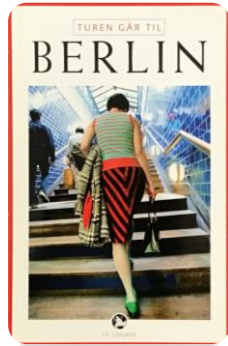
work groups, series and universes

Work groups

Work groups are collections of works, which by end users can be regarded as the same work, but are in fact different works according to RDA.

Work group

Work A



by Kirstine Therkildsen
& Henrik Vering (2004)

Work B



by Henrik Vering (2013)

Work C



by Michelle Arrouas (2017)

← is replacement of

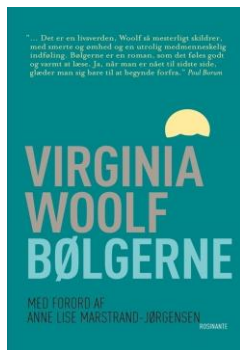
← is replacement of

Series

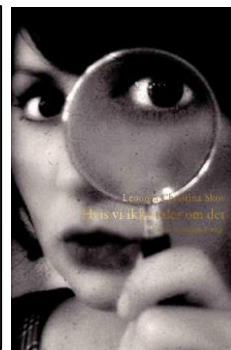
Series are collections of manifestations, which are part of a larger whole.
Series cover **bibliographic series** and **popular series**.

Bibliographic series are descriptive elements from the manifestations.
Bibliographic series can be all types of series (content, branding, publisher).

Popular series connect successive works – both if the series appear as such in the manifestations, and if they are recognized as such in public.



Bibliographic series
Rosinantes klassikereserie



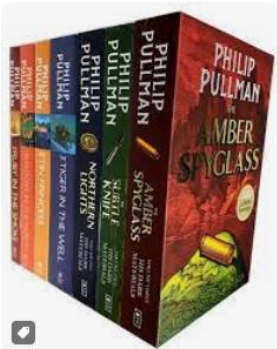
Popular series
Den der lever stille

Universes

Universes are collections of manifestations, which in some way can be connected to a fictious univers.

Universes gather multiple series, independent works, different material types in different languages.

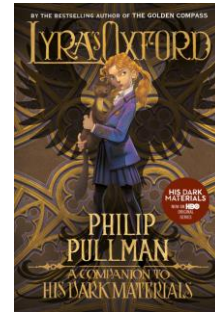
Universe



Multiple book series



Tv series



Independent works



Graphic novel series

Examples

Work

001 00 *a 134802596 *b 870979 ... -> Internal ID

...

046 00 *k 1815 -> Year of work

075 00 *b v -> Code for type of entity

130 00 *a Emma *8 eng -> Title of work

200 00 *5 870979 *6 68082900 *4 aut -> Internal link to authority record for Jane Austen

...

385 00 *c begyndelsen af 1800-tallet *8 dan -> Period of time

386 00 *a England *8 dan -> Place

388 00 *a Emma Woodhouse -> Protagonist

660 00 *s kærlighed *2 dbcsh *8 dan -> Subject heading

683 00 *a Engelsk herregårdsroman fra begyndelsen af 1800-tallet om den smukke og velhavende Emma ... *8 dan -> Summary

Examples

Data well works

English ordinary version

001 00 *a 134802626 *b 870979 ... -> Internal ID
...
046 00 *m 1815 -> Year of the first English publication
075 00 *b u -> Code for type of entity
130 00 *5 870979 *6 134802596 -> Internal link to
authority record for the work Emma
131 00 *a Emma *8 eng -> Title of data well work
377 00 *a eng -> Language of data well work

Danish ordinary version

001 00 *a 134802774 *b 870979 ... -> Internal ID
...
046 00 *m 1958 -> Year of the first Danish publication
075 00 *b u -> Code for type of entity
130 00 *5 870979 *6 134802596 -> Internal link to
authority record for the work Emma
131 00 *a Emma *8 dan -> Title of data well work
377 00 *a dan -> Language of data well work

Examples

Bibliographic record

001 00 *a 38683454 *b 870970 ...

...

100 00 *5 870979 *6 68082900 *4 aut -> Internal link to authority record for Jane Austen expanded from work record and displayed as: *a Austen *h Jane *4 aut

240 00 *a 134802596 *b 870979 -> Internal link to authority record for work expanded from data well work record and displayed as: *a Emma

241 00 *5 870979 *6 134802626 -> Internal link to authority record for data well work displayed as: *a Emma

245 00 *a Emma -> Title of manifestation

264 00 *f 1 *a London *b Vintage *c 2014 -> Publication statement

336 00 *a tekst *b txt *2 rdacontent -> Content type

337 00 *a umedieret *b n *2 rdamedia -> Media type

338 00 *a bind *b nc *2 rdacarrier -> Carrier type

385 00 *c begyndelsen af 1800-tallet -> Period of time expanded from work record

386 00 *a England -> Place expanded from work record

388 00 *a Emma Woodhouse -> Protagonist expanded from work record

660 00 *s kærlighed *2 dbcsh -> Subject heading expanded from work record

683 00 *a Engelsk herregårdsroman fra begyndelsen af 1800-tallet om den smukke og velhavende Emma ... -> Summary expanded from work record